

REMEDIAL SITE ASSESSMENT DECISION – EPA Region 05

Site Name: MILLER SALVAGE**Alias(es):****City:** COLUMBUS **County or Parish:** BARTHOLOMEW**State:** IN**Refer to Report Dated:** 09/30/2014**EPA ID:** IND980607618**Report Developed By:** STATE**State ID:****Report Type:** Site Reassessment (00X) #001

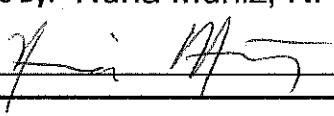
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|--|
| <input checked="" type="checkbox"/> 1. Further Remedial Site Assessment Under CERCLA (Superfund) is not required because:
NFRAP-Site does not qualify for the NPL based on existing information |
| <input type="checkbox"/> 2. Further Assessment Needed Under CERCLA. |
| <input type="checkbox"/> 3. Remedial study/cleanup needed. |

Decision/Rationale:

The U.S. Environmental Protection Agency (EPA) has determined that no further remedial action by the Federal Superfund program is warranted at the referenced site, at this time. The basis for the no further remedial action planned (NFRAP) determination is provided in the attached document. A NFRAP designation means that no additional remedial steps under the Federal Superfund program will be taken at the site unless new information warranting further Superfund consideration or conditions not previously known to EPA regarding the site are disclosed. In accordance with EPA's decision regarding the tracking of NFRAP sites, the referenced site may be removed from the CERCLIS database and placed in a separate archival database as a historical record if no further Superfund interest is warranted. Archived sites may be returned to the CERCLIS site inventory if new information necessitating further Superfund consideration is discovered.

Decision/Rationale (Continued):

Site Decision Made By: Nuria Muniz, NPL Coordinator

Signature: 

Date: 02/18/2015

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SITE REASSESSMENT REPORT

FOR

MILLER SALVAGE
GARDEN CITY, INDIANA
BARTHOLOMEW COUNTY
IND980607618

January, 2012

Signature Page
for
Site Reassessment Report
MILLER SALVAGE
GARDEN CITY, INDIANA
BARTHOLOMEW COUNTY
IND980607618

Prepared By:


RICHARD R. MILTON, PROJECT MANAGER
Site Investigation Section
Indiana Department of Environmental Management

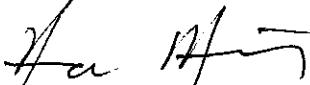
Date: 1-24-12

Approved By:


GABRIELE HAUER, SECTION CHIEF
Site Investigation Section
Indiana Department of Environmental Management

Date: 1-24-12

Approved By:


EPA SITE ASSESSMENT MANAGER
U.S. EPA Region V

Date: 9/30/14

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SECTION I INTRODUCTION

The Indiana Department of Environmental Management (IDEM), Site Investigation Section, under a Cooperative Agreement (CA) with the United States Environmental Protection Agency Region V (EPA), has been funded to perform Site Reassessments at certain sites listed in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). This work is conducted under the authority of the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (a.k.a. Superfund), and the Superfund Amendments and Reauthorization Act (SARA) of 1986. Sites eligible for Site Reassessment include those sites for which the Screening Site Inspection (SSI), Preliminary Assessment (PA), or Other Cleanup Authority (OCA) determined that a designation of “No Further Remedial Action Planned” (NFRAP) was appropriate, but subsequent information resulted in a reopening of the investigation.

The primary objectives of the Site Reassessment are:

- To reassess sites that had previously been assessed under CERCLA to determine if the site should be placed on the National Priorities List (NPL).
- To address immediate threats to human health and/or the environment.

The Miller Salvage Site Reassessment also included the following objective:

- To assess the site following the issuance of a No Further Action (NFA) letter from IDEM’s State Cleanup Section (SCS) on August 5, 2010. Miller had previously been investigated under IDEM’s Site Investigation Program but had been referred to SCS following notification by Cummins Engine Company (Cummins), Columbus, IN, as the Responsible Party (RP). Cummins served as the RP for the site based on its disposal of waste oils and paint containing solvents at Miller prior to 1970. Following Cummins assessment, contamination was deemed insufficient by the SCS to warrant further remedial action under their program.

The Site Investigation Section was given approval by EPA to conduct a Reassessment at the Miller Salvage site in 2011.

On August 9-10, 2011, IDEM conducted a Reassessment of the Miller Salvage property. The purpose of the Miller Salvage Reassessment is to review the information gathered in the previous environmental assessments, combine that data with any additional sampling data obtained during the Reassessment, and to determine the future course of action for this site. The Reassessment took place at the same time as the Garden City Ground Water Plume Expanded Site Investigation (ESI). The purpose of the ESI was to attempt to discover the source of trichloroethene (TCE) contamination in the community’s potable wells.

SECTION II SITE BACKGROUND

2.1 SITE DESCRIPTION

Miller Salvage (Miller) is an active auto/scrap metal salvage operation encompassing approximately 30 acres located at 5 Kenmill Road in the unincorporated community of Garden City, approximately 1 mile south of Columbus, Indiana. The surrounding area is mostly rural with the residential areas of Garden City generally west of the site. Although active, the site is under new ownership and has less than 100 cars and small amounts of assorted scrap metal. The property is mostly overgrown with weeds and shrubbery. The site soils consist of silty loams and fill (mostly foundry sand). Agricultural fields and woodlands surround the site on three sides. There are several residences within ¼ mile from the site.

Less than 1 mile north of the Miller is an NPL site, a former Columbus city landfill (IND980607626). The landfill has been remediated and is currently under long-term monitoring.

Ground water flow varies seasonally but is generally south/southeast and influenced by the pumping of the City of Columbus' Marr-Glick and Southern Well Fields. [REDACTED] Non Responsive [REDACTED]. Miller

Salvage is within the Wellhead Protection Area (WHPA) for Columbus and is also down-gradient of ground water flow through much of Garden City.

The only major surface water nearby is the East Fork of the White River (East Fork). It is less than ¼ mile to the east. There are several oxbow lakes in the woodland areas north and east of the site. See Attachment A, Figure 1 for a site map and surrounding areas.

2.2 SITE HISTORY

The site has been mainly used as an automobile and appliance salvage yard since the early 1930s. Miller also accepted industrial waste in a 2-acre unlined disposal pit located in the south-central section of the property. From 1952 through 1969, local industries disposed of liquid and solid wastes in this pit by burning, including waste oils, drummed paint waste and paint filters, boxes, and paper. The local industries included: Cummins Engine Company (Cummins), Cosco Inc., Arvin Industries and others. According to the previous owners of Miller Salvage, the disposal pit was closed in 1969 and covered with foundry sands. A sawmill/pallet manufacturing facility was constructed on the disposal pit area in 1971.

EPA was informed of potential contamination at Miller in August 1981, when Cummins submitted a Notification of Hazardous Waste Site form to EPA in compliance with Section 103(c) of CERCLA. This notification stated that Cummins had deposited 3.5 million gallons of process waste oil containing between 1952 and 1969 at the site. Waste oil analysis conducted by Cummins in 1983 revealed contaminants such as trichloroethane (TCE), toluene, lead, and waste acids in the deposited waste oil.

In November 1985, EPA conducted a sampling program at Miller and collected on-site groundwater samples and sediment samples from the East Fork, which is located $\frac{1}{4}$ mile east of the site. Groundwater on-site revealed elevated levels of methylene chloride that was considered attributable to the Miller waste disposal activities.

In October 1991, EPA conducted an extensive investigation which included 10 soil borings which were completed as nine monitoring wells and one pieziometer. The surface soils contained elevated concentrations of TCE and various heavy metals (aluminum, barium, cadmium, lead, mercury, etc.). Groundwater samples indicated one elevated concentration of TCE in excess of the EPA Maximum Contaminated Levels (MCLs) established under the Safe Water Drinking Act.

In 1999, IDEM prepared a Site Inspection Work Plan to further investigate the Miller site as a possible source of contamination of residential wells in Garden City. Following discussions between EPA and IDEM, it was determined not to pursue Miller's placement on the NPL but rather to pursue remedial action through the responsible party (Cummins). To facilitate this, IDEM's Site Investigation Section referred the Miller Salvage site to IDEM's State Cleanup Section in February 2003. Cummins consulted with Haley & Aldrich, Inc., to complete a remedial investigation of the site.

In August 2005, Cummins submitted a Remedial Investigation Work Plan to SCS for review. The work plan called for the review and evaluation of existing data, repair and redevelopment of the existing monitoring wells network, installation of additional monitoring wells, and the collection and analysis of ground water samples over an undefined period of time. The work plan was approved by IDEM in February 2006.

Following implementation of the work plan, Cummins submitted a Remedial Investigation Report, dated October 3, 2006; a Supplemental Remedial Investigation Report, dated February 2008; and a final summation Quarterly Groundwater Sampling Report – March 2010 Sampling Event, dated April 6, 2010. After review and approval by IDEM, Cummins requested that “No Further Action” status be granted for the Miller site. IDEM SCS staff agreed that contamination was deemed insufficient to warrant further remedial action under the State Cleanup Program. SCS issued a No Further Action (NFA) letter to Cummins on August 5, 2010.

SECTION III

PROCEDURES, FIELD INVESTIGATIONS AND ANALYTICAL RESULTS

3.1 INTRODUCTION

This section outlines the procedures, observations, and analytical results of the Miller Salvage Reassessment activities On August 9-10, 2011.

3.2 REASSESSMENT SAMPLING PROCEDURES

To implement the Reassessment of the Miller site, IDEM personnel were divided into three teams. Sampling Team #1 was responsible for sampling the City of Columbus municipal ground water wells. Sampling Team #2 utilized direct-push boring equipment and conducted ground water and subsurface soil (>8" bgs) sampling. Team #3 was the Scribe team responsible for the documentation, packaging, and shipping of all samples. Team #3 was located at the Columbus Water Works building, approximately ½ mile southeast from the Miller site.

A total of 10 ground water samples and 7 subsurface soil samples were collected. This total included duplicates but not trip blanks or additional volume for MS/MSD. All samples were collected via direct-push borings except for the municipal well samples. All samples will be analyzed for VOCs only based on previous investigations.

Subsurface soil samples were taken from above the water table. Samples ranged from 7.5' to 17' below ground surface (bgs). The soil sample was extracted from the boring core in the area exhibiting the highest reading for VOCs on the MultiRae PID or, if no VOCs were detected, immediately above the water table. Sampling was conducted over a 2 day period by IDEM staff. Samples were collected, iced, packaged, and shipped to the appropriate CLP lab each evening.

All sample collection and analysis was conducted in accordance with the approved IDEM Quality Assurance Protection Plan (QAPP), dated April 30, 2008, IDEM Standard Operating Procedures (SOPs) and the Contract Lab Program (CLP) protocol. A field duplicate was taken 1 per matrix for each 10 samples. MS/MSDs were collected 1 per matrix for each 20 samples. All sample locations were photographed and recorded using the Global Positioning System (GPS). See Attachment A, Figure 2, for all sampling locations. Photos are in Attachment C.

On August 9, 2011, Team #1 collected ground water samples from Municipal Well #12 (GW-30) and Municipal Well #9 (GW-31), southeast and south, respectively, of the Miller site. These samples were taken to evaluate the possible impact on the municipal wells of ground water flow through the Miller site. Team #2 collected a background subsurface soil sample (SF-1) and background ground water sample (GW-1) north and up-gradient of ground water flow from the Miller Salvage site. The sample was taken along State Road 11, also known as Jonesville Road. All samples collected on August 9, 2011, were documented, iced, and shipped overnight to the appropriate CLP laboratory by Team #3 that evening.

On August 10, 2011, Team #2 began direct-push borings at four (4) locations within the Miller Salvage property. Two (2) additional borings were taken on an adjacent property, just south of Miller.

Sample location SF-22/GW-22 was taken in the northwest corner of the Miller which appears to have never been impacted by any Miller Salvage operations. The sample location is several hundred feet from, and up-gradient of ground water flow, the former burn pit area. This location, along with SF-1/GW-1, is being used as a background sample.

Sample locations SF/GW-23, SF/GW-24 (duplicate of SF/GW-23), SF/GW-25 and SF/GW-27, were taken in the suspected former burn pit area. These samples are being taken as confirmation of contaminant levels found during the Cummins Remedial Investigations.

Sample locations SF/GW-26 and SF/GW-28 were taken south and down-gradient of ground water flow from the current Miller property boundary. This area was part of Miller Salvage prior to 1969 and may have been within the former burn pit area. These samples were taken to assess attribution from the Miller site and its possible impact upon the Columbus well field.

The adjacent agricultural fields contained mature crops at the time of the sampling and limited areas where the direct-push sampling could be conducted.

3.3 ANALYTICAL RESULTS

Analytical results were received by IDEM via electronic mail starting on September 9, 2011. Additional results were received through October 10, 2011.

The laboratory results from the Miller Salvage Reassessment have been determined to be acceptable for use and satisfy the criteria contained in the Contract Laboratory Program. Relevant sample results are contained in the Key Findings Sample Tables in Attachment B. Complete sample documentation is contained in Attachment D. Samples may exhibit a “J” (+ or -), “U” or “R” flag. “J” indicates an estimated value. This flag is used when the mass spectral data indicate the presence of an analyte meeting all the identification criteria but the result is less than the Contract Required Quantitation

Limit (CRQL), but greater than zero. None of the “J” flagged results were above the CRQL, therefore recalculation was not necessary in accordance with the November 1996 USEPA Publication *Using Qualified Data to Document an Observed Release*. The “U” flag indicates the constituent was undetected. The “R” flag means the sample was rejected and the datum is unusable.

As stated earlier, the Garden City Ground Water Plume ESI sampling took place at the same time as the Miller Salvage Reassessment sampling. Samples from the two events were sent to different CLP labs using different method detection levels. The CLP lab analyzing the Miller Salvage samples utilized CLP TVOA (low) while the lab analyzing the Garden City samples utilized the CLP TVOA (trace).

CLP TVOA (low) which was used on all Miller Salvage samples has a Contract Required Quantitation Limit (CRQL) of 5.0 ug/l for TCE. This means TCE can only be reliably quantified above 5.0 ug/l. The presence of TCE may be detected below 5.0 ug/l but any results are considered estimated values (“J”).

CLP TVOA (trace), which was used on all Garden City ESI samples, has a CRQL for TCE of 0.5 ug/l. This means TCE can be quantified at a much lower level. CLP TVOA (trace) is the only analysis which can reliably detect the presence of TCE at the Superfund Chemical Data Matrix (SCDM) Cancer Risk Screening Concentration benchmark of 1.0 ug/l. All detections below 0.5 ug/l are estimated values (“J”).

Three of the background sample locations (SF-1/GW-1, and GW-22) and two of the municipal well sample locations (GW-30 and GW-31) were utilized in both the Miller Reassessment and the Garden City ESI. Subsurface soil and/or groundwater samples were collected for both the Reassessment and the ESI at the same at these sample locations. Samples were then sent to their assigned CLP labs. When both lab results were received and compared by IDEM staff, it was apparent that the Garden City ESI samples, which utilized the CLP TVOA (trace), could detect the presence of TCE at much lower levels than CLP TVOA (low). Since these samples were taken at the same time, location, and with the same equipment, it was decided to use the two background samples (E2SB2 and E2S91) and the two municipal well samples (E2S11 and E2S51) from the Garden City ESI in the Miller Reassessment.

Sample results for VOCs were compared to SCDM benchmarks and background constituent levels. Background levels were established through sample locations SF-1 (E2SB1) and SF-22 (E2S89) for subsurface soils, and GW-1 (E2SB4) and GW-22 (E2S91) for ground water.

3.3.1 Subsurface Soil Samples

Subsurface soil samples were collected at locations SF-1(14.5' bgs) and SF-22 (9' bgs) to establish VOC background constituent levels. Neither sample exhibited any VOCs in soil above CRQLs. The CRQL for each constituent was

used as the background level if that constituent was detected at another sampling location.

Of the samples taken in the former burn pit location SF-23 (7.5' bgs), SF-24 (duplicate of SF-23), SF-25 (17' bgs) and SF-27 (13' bgs), only samples SF-23 and SF-24 exhibited any VOCs in subsurface soil above CRQLs. Acetone and 2-butanone (MEK) were detected above their respective CRQL but significantly below SCDM benchmarks. Acetone and methylene chloride are common lab contaminants and were found the VOC trip blanks shipped with each cooler. MEK was detected in only one sample from the duplicate taken at SF-23/SF-24.

Sample locations SF-26 (9' bgs) and SF-28 (7.5' bgs) were taken off the current Miller Salvage property. Neither sample exhibited any VOCs. See Attachment A, Figure 3, for soil background concentrations and key findings, and Attachment B, Key Findings Tables, Table B1 for the volatile organic analysis detections for all subsurface soil samples.

3.3.2 Ground Water Samples

Background ground water samples were collected at GW-1 and GW-22. These locations are generally up-gradient of ground water flow through the Miller Salvage site. Ground water flow is seasonally influenced by flooding of the East Fork and by pumping from the Columbus Marr-Glick well field.

The analysis of the background ground water samples from GW-1 and GW-22 utilizing CLP TVOA (trace) contained no VOCs above their respective CRQLs or SCDM benchmarks. Only those contaminants which have SCDM benchmarks are discussed in this Reassessment.

Sample locations GW-23 (15'bgs), GW-24 (duplicate of GW-23), GW-25 (17.7' bgs) and GW-27 (13.5' bgs), were taken in the former burn pit location. All four (4) samples detected concentrations of acetone and methylene chloride. All detections were significantly below their SCDM benchmark. Samples GW-23, its duplicate GW-24, and GW-25, also had detections below the CRQL for cis-1,2-dichloroethene.

Sample locations GW-26 (9.5' bgs) and GW-28 (8' bgs) were taken south the current Miller property line. According to Bartholomew County GIS website information, this area is still owned by the Miller family and may have once been part of the Miller burn pit. The samples were taken as far south as possible to try and avoid the former burn pit area.

Methylene chloride was detected at 6.2 ug/l in GW-28. This exceeded the CRQL (5 ug/l), used as a background concentration, and was significantly below the SCDM benchmark of 2,200 ug/l. TCE was detected in both GW-26, (3.0 ug/l)

and GW-28 (1.8 ug/l). Both of these values were qualified as “J” values. These results were not adjusted since the contaminant levels are below the CRQL (5 ug/l) for TCE utilized in CLP TVOA (low). It can be assumed that the estimated “J” values detected in CLP TVOA (low) will exceed the SCDM benchmark of 1.0 ug/l. The results are consistent with the past ground water sampling conducted by Cummins under the auspices of IDEM’s State Cleanup Section.

Samples taken from municipal wells at locations GW-30 (E2S11) and GW-31 (E2S51) were collected via attached spigots at the wellhead. Both of these samples had detections for TCE. Sample location GW-30 contained TCE at 0.66 ug/l and in GW-31 at 0.35 ug/l (J). These results do not exceed the SCDM benchmark for TCE in drinking water but do exceed background concentrations.

Trip blank samples exhibited the comparatively high levels of acetone, methylene chloride, and chloroform indicating lab contamination.

See Attachment A, Figure 4, for background ground water concentrations and Key Findings, and Attachment B, Key Findings Tables, Table B2, for the volatile organic analysis detections for all ground water samples.

SECTION IV DISCUSSION OF MIGRATION PATHWAYS

4.1 INTRODUCTION

Potential migration pathways for contaminants migrating from the Miller Salvage site are discussed in this section. Potential contaminant migration through ground water, surface water (including Drinking Water Threat, Human Food Chain Threat, and Environmental Threat), soil exposure, and air are discussed.

4.2 GROUND WATER PATHWAY

The Miller Salvage site is located in a bedrock valley on a continuous and unconfined sand and gravel aquifer. The aquifer is the only hydrologic unit and is approximately 70 to 90 feet thick and directly overlies the shale bedrock. The sand and gravel aquifer is being used for the potable water supply in the vicinity of the Miller Salvage site. At the time of the Reassessment, ground water was encountered between 8' and 17.7' bgs. The bedrock is not considered an aquifer.

The Miller site is also within the wellhead protection area for the City of Columbus.

Non Responsive

Ground water samples taken on the Miller Salvage property exhibited no VOCs above drinking water Maximum Contaminant Limits (MCLs). Background samples taken up-gradient of ground water flow exhibited similar results. The two ground water samples (GW-26 and GW-28) taken south of the present Miller property line exhibited estimated detections above the TCE SCDM Cancer Risk Screening Concentration benchmark of 1.0 ug/l. Both samples had contaminant levels below the MCL for TCE in drinking water. The nearest residential potable well is approximately ¼ mile from either sample location. The nearest municipal well (#2) is <½ mile to the south.

4.3 SURFACE WATER PATHWAY

The surface water/overland flow migration component was not evaluated in the Miller Salvage Reassessment. The site is adjacent to the East Fork of the White River which is part of the White River watershed. The East Fork originates approximately 1 mile north of the Miller site where the Flatrock River joins the Driftwood River. Runoff from the site has the potential to flow directly to the East Fork. The Miller site is in the floodplain of the East Fork and is frequently inundated. There are no storm sewers on the property.

4.3.1 Drinking Water Threat

All residences within a ½ mile radius of the Miller Salvage site obtain drinking water from the potable ground water wells. There are no known surface water intakes within the 15-mile Target Distance Limit of the East Fork downstream of the Miller Salvage site. A threat to drinking water via the surface water pathway does not exist.

4.3.2 Human Food Chain Threat

This pathway generally targets fisheries where consumption of contaminated species may occur. The East Fork and the surrounding oxbow lakes in the vicinity of Miller Salvage are used for fishing. According to the 2010 Indiana Fish Consumption Advisory, a Level 3 Fish Advisory is posted for several species of fish in the East Fork due to excessive PCB concentrations. PCB contamination was not evaluated in this Reassessment. Previous investigations had not revealed PCBs as a contaminant of concern.

4.3.3 Environmental Threat

The site is in a rural area and has been used as a scrap and salvage yard for over 60 years. An environmental threat from the site would most likely exist to the East Fork waterway but there is no indication that this has occurred.

The Indiana Department of Natural Resources/Division of Nature Preserves-Heritage Program (IDNR/DNP-HP) documents sensitive environments and/or endangered or threatened species within the State of Indiana.

Bartholomew County is home to several federally-endangered mollusk species and the Indiana bat (*Myotis sodalis*). The East Fork could provide the appropriate habitat for these species but there is nothing to indicate these species have been impacted.

4.4 SOIL EXPOSURE PATHWAY

Surface soil samples were not taken during the reassessment. Subsurface samples exhibited no contaminants above SCDM levels. There are no residences within 200' of the Miller Salvage former burn pit area. The potential for a soil exposure pathway was not evident.

4.5 AIR PATHWAY

The air pathway was not evaluated in this reassessment. Miller is an active auto/scrap metal salvage operation but no odors or air particulates were evident at the time of the IDEM reassessment. There is no known risk to nearby residents via the air pathway from the Miller Salvage.

SECTION V SUMMARY

On August 9-10, 2011, IDEM conducted a Reassessment of the Miller Salvage property. The purpose of the Miller Salvage Reassessment is to review the information gathered in the previous environmental assessments, combine that data with any additional sampling data obtained during the Reassessment and, to determine the future course of action for this site. The Reassessment took place at the same time as an Expanded Site Investigation (ESI) in Garden City. The purpose of the ESI was to attempt to discover the source of trichloroethene (TCE) contamination in the community's potable wells.

Soil and ground water samples obtained and analyzed during the Reassessment exhibited no VOCs above SCDM benchmarks except in ground water for TCE in GW-26, GW-28, GW-30 (Municipal Well #12), and GW-31 (Municipal Well #9). A few other VOCs were detected above CRQLs but the majority of the detections may have been the result of lab contamination. This Reassessment confirmed that subsurface soil and ground water samples taken on the current Miller Salvage property exhibited no TCE contamination above SCDM benchmarks or background concentrations. Ground water contamination above SCDM benchmarks was discovered at sampling locations GW-26 and GW-28, directly south and adjacent to the present property line. These sampling locations may once have been part of the Miller unlined disposal pit. The property has been divided since the disposal pit closed in 1969.

Based on the results of the Reassessment, no potential soil contaminant source could be located on the Miller property but past disposal activities at Miller cannot be ruled out as a source of TCE contamination in ground water.

SECTION VI REFERENCES

Columbus City Utilities
1111 McClure Road
Columbus, IN 47202-1987

Indiana Department of Natural Resources
Fish and Wildlife Division
Indianapolis, IN 46204
2010 Indiana Fish Advisory
http://www.in.gov/isdh/files/2010_FCA_May28.pdf

Indiana Department of Environmental Management
Office of Land Quality
Virtual File Cabinet documents for Miller Salvage, Bartholomew County:

- Doc. #49959544 - Soil Survey of Bartholomew County
- Doc. #49982580 - Notification of Hazardous Waste Site dated 8/4/1981
- Doc. #47632049 - Executive Summary and Preliminary Assessment 10/19/84
- Doc. #47632054 - Ecology and Environment, Inc. Memorandum dated 11/4/1985
- Doc. #49929900 - Site Inspection for Miller Salvage dated 11/4/1985
- Doc. #49982591 - Final Report PRP information dated 9/1/1988
- Doc. #50587882 - Ground Water Pathway Assessment dated 2/17/1989
- Doc. #49931316 - E&E Lab Data dated 1/24/1990
- Doc. #49929130 - Expanded Listing Site Inspection dated 10/31/1991
- Doc. #49956893 - Columbus City Utilities Lab Data dated 4/2/2003
- Doc. #49932573 - Remedial Investigation Work Plan dated 8/5/2005
- Doc. #49929729 - Remedial Investigation Report dated 10/3/2006
- Doc. #49928643 - Supplemental Remedial Investigation Report dated 2/21/2008
- Doc. #38734944 - Supplemental Remedial Investigation Report dated 11/2008
- Doc. #42800237 - IDEM Correspondence dated 1/26/2009
- Doc. #54844525 - Quarterly Monitoring Report dated 4/2010
- Doc. #57462457 - IDEM No Further Action Letter dated 8/5/2010

Indiana Department of Natural Resources
Water Well Record Database
<http://www.in.gov/dnr/water/3595.htm>

ATTACHMENT A


Maps

**Miller Salvage
Garden City, Bartholomew County, IN
EPA ID IND980607618**

**Site Map
Non Responsive**

Miller Salvage - EPA FID IND980607618
Garden City, Bartholomew County, IN
August 2011 Sample Location Map

Non Responsive



Miller Salvage - EPA FID IND980607618
Garden City, Bartholomew County, IN
August 2011 Soil Background and Key Findings Map

Non Responsive

Unknown RR

Miller Salvage - EPA FID IND980607618

Garden City, Bartholomew County, IN

August 2011 Ground Water Background and Key Findings Map

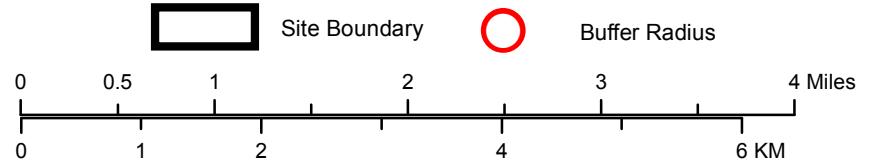
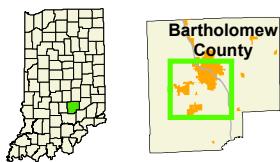
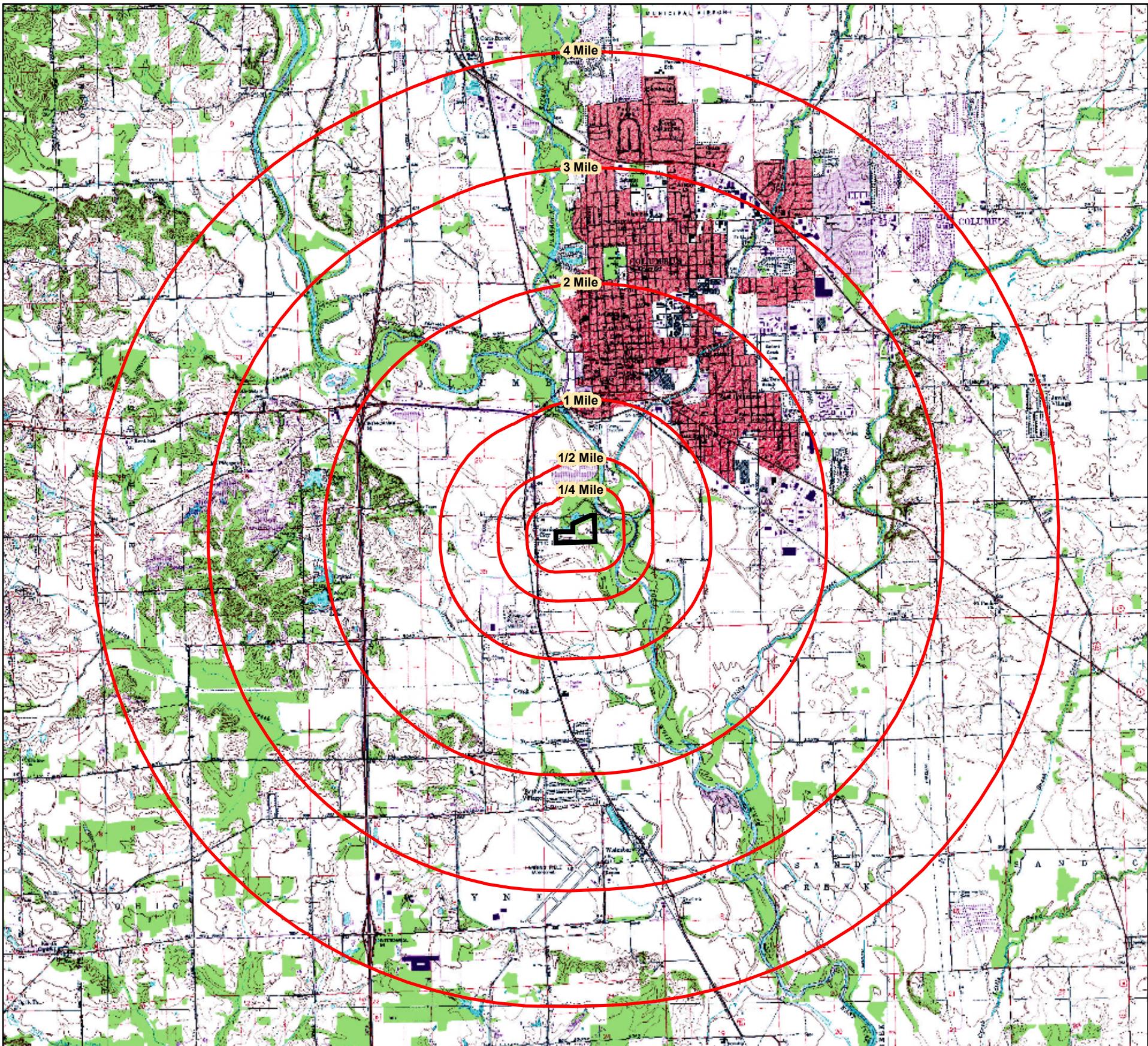
Non Responsive



Miller Salvage
Garden City, Bartholomew County, IN
EPA ID IND980607618
Four Mile Radius Map

85°55'23.91"W 39°11'2.72"N
 (Approximate Center of Site)

Buffer Distance	Adjusted Population
0 - 1/4 Mile	98
1/4 - 1/2 Mile	177
1/2 - 1 Mile	597
1 - 2 Mile	6100
2 - 3 Mile	8883
3 - 4 Mile	11801
Total Adjusted Population	27656



All models were developed by E.J. McNaughton, IDEM GIS Coordinator

Mapped by: Diane Osborn, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services

November 21, 2011

Sources:

IDEM 4 Mile Mapper Application
 Indiana Geographic Information Officer (GIO) Data Library
 USGS Digital Raster Graphics 1:24,000 topographic map
 Census block group 2006 total population

Disclaimer: This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

There are known sources of error in the population estimates presented on this map including:

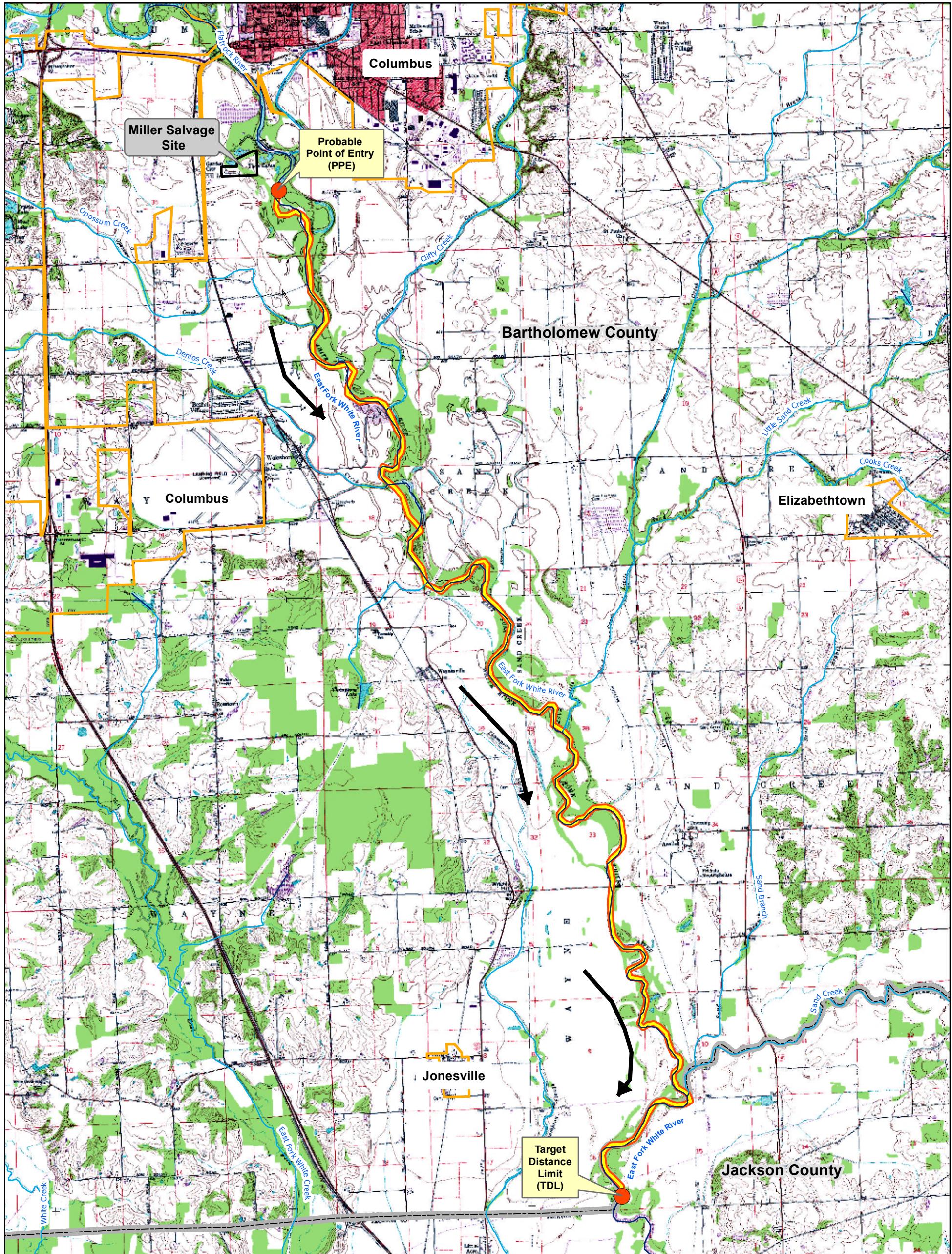
- The Census 2006 block group population data is out of date, and is itself an imperfect estimate of population.
- The adjusted population estimate derived from the Census 2006 block group data assumes that the population is evenly distributed in each block group polygon.
- The Census 2006 block group population has been clipped to include Indiana data only.

Method of Estimating Population: The adjusted population estimate is the sum of Census 2006 block group populations. The adjusted population estimate (TOTPOP field) is adjusted to include only the areas of the block groups contained inside the buffers. The adjusted population estimate assumes that the population is evenly distributed in each block group polygon. The specific procedure used in this analysis is as follows:

1. The point for the center of the site is selected interactively by the user through the 4 Mile Mapper model or a polygon is digitized through the 4 Mile Mapper Polygon model.
2. The user initiates the 4 Mile Mapper model to perform the rest of the multi-step analysis which is described in the following steps.
3. The study area point or polygon is buffered at 1/4, 1/2, 1, 2, 3 and 4 miles.
4. The original area of the census block polygons is calculated and stored.
5. The buffers are used to clip the census block group polygons. This is a new area referred to as the shape area. The shape area has the attribute records associated with the original census block group polygon with the area of the new polygon area.
6. The shape area of the census block polygons is divided by original area of the census block polygons to calculate the percent change.
7. The percent change result is then multiplied by the population of the original census block to yield a calculated population for the new polygon. For example: Block Group A with an area of 10 square miles and a population of 200 people is split into 2 polygons by the 4 mile buffer ring. The area of the block group inside the 4 mile buffer is 2 square miles, or 20% of the area of the original 10 square mile block group. Assuming the population is uniformly distributed in Block Group A, the population from Block Group A that is within the 4 mile buffer ring should also be 20% of the total population for the block group. Twenty percent of 200 is 40 people. ($2 \div 10 \times 200 = 40$)
8. The newly calculated population statistics are associated in a database table that is converted into a layer file that is displayed in the Four Mile Radius Map. The new population figures from the layers (attribute tables) are then copied into a spreadsheet that subtracts the population figure from the previous buffer. This is done by taking the population for each buffer distance and subtracting the population of the next smaller buffer distance to provide a population figure for the donut area bounded by each pair of consecutive buffer distances (e.g. 0 to 1/4, 1/4 to 1/2, 1/2 to 1, 1 to 2...). An adjusted population table is labeled and pasted into the Four Mile Radius Map.

The main code that repeats over and over for the 4Mi_Mapper model is: Buffer>Clip>Add Fields>Calculate Field>Dissolve

Miller Salvage
Garden City, Bartholomew County, IN
EPA ID IND980607618
15 Mile Surface Water Map



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: Diane Osborn, Office of Land Quality
 Date: November 21, 2011

0 0.5 1 Miles
 0 0.5 1 KM



	Site Boundary
	Flow Path
	Fifteen Mile Surface Path



Sources:

Non Basemap Data

- Obtained from the State of Indiana Geographical Information Office Library

Basemap Data

- USGS Digital Raster Graphics

1:24,000 topographic map

Map Projection: UTM Zone 16 N

Map Datum: NAD83

ATTACHMENT B

Soil and Ground Water Key Findings and Analytical Results

TABLE B1

Soil Key Findings
from the
Sample Data Groups Documentation

BACKGROUND vs. KEY FINDINGS LIST
 SCDM listed contaminants which exceeded
 background levels or benchmarks

Soil Background Sample Results VOCs (ug/kg)		
<u>Sample Location</u>	<u>Contaminants</u>	<u>Level</u>
SF-1 (E2SB1)*	All SCDM VOCs	Below Contract Required Quantitation Limits (CRQLs) and SCDM benchmarks
SF-22 (E2S89)		

Key Findings List Soil Sample Results VOCs (ug/kg)		
<u>Sample Location</u>	<u>Contaminants</u>	<u>Level</u>
SF-23 (E2S85)	Acetone	36**
SF-24 (E2S97) Duplicate of SF-23	Acetone 2-Butanone (MEK)	270** 54**

* Results from Garden City ESI sample

** Probable lab contaminants.

Trip blanks showed lab contamination with Acetone and Methylene chloride. MEK present only in soil duplicate.

TABLE B1**Volatile Organic Analysis**

Site Name:	Miller Salvage
Site Number:	IND980607618
Location:	Garden City, Bartholomew Co., IN
Date Sampled:	August 9-10, 2011
Date Reported:	29-Sep-11
Lab:	A4 Scientific

Soil

UNITS: ug/kg

			TCE	Acetone	Isopropyl benzene	2-Butanone (MEK)
CRQLs			5	10	5	10
Background Levels			0	0	0	0
Sample #			HRS SCDM for Soil Pathway	780,000	70,000	NA
Lab #	IDEM #	Type/ ID#				
0014539-01	E2S26	SF-27 @ 13 feet				
0014539-02	E2S28	SF-26 @ 9 feet				
0014539-03	E2S30	SF-28 @ 7.5 feet				
0014539-04	E2S32	SF-25 @ 17 feet				
0014539-05	** E2S85	SF-23 @ 7.5 feet		*** 36	3.5 J	
0014539-06	** E2S87	SF-24 @ 7.5 feet		*** 270	8.4 J	*** 54
0014539-07	E2S89	SF-22 @ 9 feet Background				
1122259009	*E2SB1	SF-1 @ 14.5 feet Background				

Empty Box indicates NON-DETECTABLE

*Sample taken from Garden City ESI. CRQL for TCE= 0.5 ug/l

** FIELD DUPLICATE

***Exceed Background Levels

J- The analyte was positively identified; the associated numerical value is an approximate concentrations of the analyte in the sample

N- The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification

Contract Required Quantitation Limits (CRQLs) varies slightly with sample

TABLE B2

**Ground Water Key Findings
from the
Sample Data Groups Documentation**

BACKGROUND vs. KEY FINDINGS LIST
 SCDM listed contaminants which exceeded
 background levels or benchmarks

Ground Water Background Sample Results VOCs (ug/l)		
<u>Sample Location</u>	<u>Contaminants</u>	<u>Level</u>
GW-1 (E2SB2)*	All SCDM VOCs	<CRQLs
GW-22 (E2S91)*		

Key Findings List Ground Water Sample Results VOCs (ug/l)		
<u>Sample Location</u>	<u>Contaminants</u>	<u>Level</u>
GW-26 (E2S29)	Trichloroethene (TCE)	3.0(J)
GW-28 (E2S31)	Trichloroethene (TCE)	1.8(J)
GW-30 (E2S11)*	Trichloroethene (TCE)	0.66
GW-31 (E2S51)*	Trichloroethene (TCE)	0.35(J)

* Results from Garden City ESI sample

TABLE B2

Volatile Organic Analysis

Groundwater

Site Name: Miller Salvage
Site Number: IND980607618
Location: Garden City, Bartholomew Co., IN
Date Sampled: August 9-10, 2011
Date Reported: 3-Oct-11

UNITS: ug/L

Sample #		Type/ID#	Acetone	Methylene chloride	Chloroform	cis-1,2-Dichloroethene	Tri-chloroethene (TCE)	Chloro-methane	Toluene	Chloroethane	Methyl cyclohexane	Isopropyl benzene
Lab	IDEM											
		Background	0	0	0	0	0	0	0	0	0	0
		CRQLs	10	5	#5	5	5 or 0.5 [#]	5	5	5	5	5
Hazard Ranking System (HRS) Superfund Chemical Data Matrix (SCDM) for Groundwater			33,000	2,200	NA	70	1.0	NA	1,000	NA	NA	NA
0014530-01	* E2S20	GW-51, trip blank										
0014538-09	* E2S24	GW-55, trip blank	21	7	1.4 J							
0014538-01	*E2S25	GW-56, temp blank	16	7.1								
0014538-02	E2S27	GW-27 @ 13.5 feet	16	5.3								
0014538-03	E2S29	GW-26 @ 9.5 feet			6.7	3.7 J	3.0 J					
0014538-04	E2S31	GW-28 @ 8 feet	4.5 J	6.2		1.2 J	1.8 J					
0014538-05	E2S33	GW-25 @ 17.7 feet	9.8 J	7.7	1.6 J	1.2 J		2.2 J	1.3 J			
1122254001	***E2S11	GW-30, municipal well #12					0.66					
1122254006	***E2S51	GW-31, municipal well #9					0.35 J					
0014538-06	** E2S86	GW-23 @ 15 feet	6.6 J	7.4		1.4 J		1.1 J		5.6	1.2 J	14
0014538-07	** E2S88	GW-24 @ 15 feet	6.0 J	5.7		1.4 J		1.2 J		6.2	1.2 J	12
1122250002	***E2S91	GW-22 @ 9.25 feet, background	19	6.5						1.5 J		
1122254011	***E2SB2	GW-1 @ 15 feet background	2.6 J									

Empty Box indicates NON-DETECTABLE

* BLANK (Type indicated)

** FIELD DUPLICATE

*** Sample results taken from the Garden City ESI.

[#]Garden City ESI sample analyses utilized a lower CRQL for TCE (0.5 ug/l).

NA=NOT AVAILABLE

J - The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

CRQL - Contract Required Quantitation Limits

ATTACHMENT C

Site Photos

Miller Salvage Photo Log

August 9-10, 2011



Site: Miller Salvage

Site No.: IND980607618

Location: SF-1 and GW-1

Non Responsive

Date: August 9, 2011

Sample No.: E2SB3 and E2SB4

Description: Background subsurface soil and ground water sample up-gradient of ground water flow through the Miller Site

Photo By: Tim Johnson

Weather Conditions: Hot, Sunny



SF-1

E2SB3

14.5' below ground surface (bgs)

Silt with clay and trace of sand



GW-1

E2SB4

15' bgs

Clear, no odor



**Garden City Ground Water Plume ESI samples
E2SB1 and E2SB2 taken at the same time and
location as E2SB3 and E2SB4 and used to
establish background concentration in the
Miller Salvage Reassessment**

Site: Garden City Ground Water Plume

Site No.: IND000508642

Location: SF-1 and GW-1

Non Responsive

Sample No.: E2SB1 and E2SB2

**Description: Background subsurface soil and ground water
sample up-gradient of ground water flow through Garden City.**

Photo By: Tim Johnson

Weather Conditions: Hot, Sunny



**SF-1
E2SB1
14.5' below ground surface (bgs)
Silt with clay and trace of sand**



**GW-1
E2SB2
15' bgs
Clear, no odor**



Site: Miller Salvage
Site No.: IND980607618
Location: SF-22

Non Responsive

Date: August 10, 2011
Sample No.: E2S89
Description: Background subsurface soil up-gradient of ground water flow through the Miller Site
Photo By: Tim Johnson
Weather Conditions: Hot, Sunny



SF-22
E2S89
8.5 to 9' bgs
Light brown silty clay



Site: Miller Salvage
Site No.: IND980607618
Location: GW-22

Non Responsive

The location would be representative of background contaminants entering the site from Garden City.

Date: August 10, 2011

Sample No.: E2S90

Description: Background ground water up-gradient of ground water flow through the Miller site.

Photo By: Tim Johnson

Weather Conditions:

Hot, Sunny



GW-22
E2S90
9.25'(bgs)
Slightly cloudy with brown cast,
no odor.



Site: Miller Salvage
Site No.: IND980607618

Location: SF-23

Non Responsive

Date: August 10, 2011

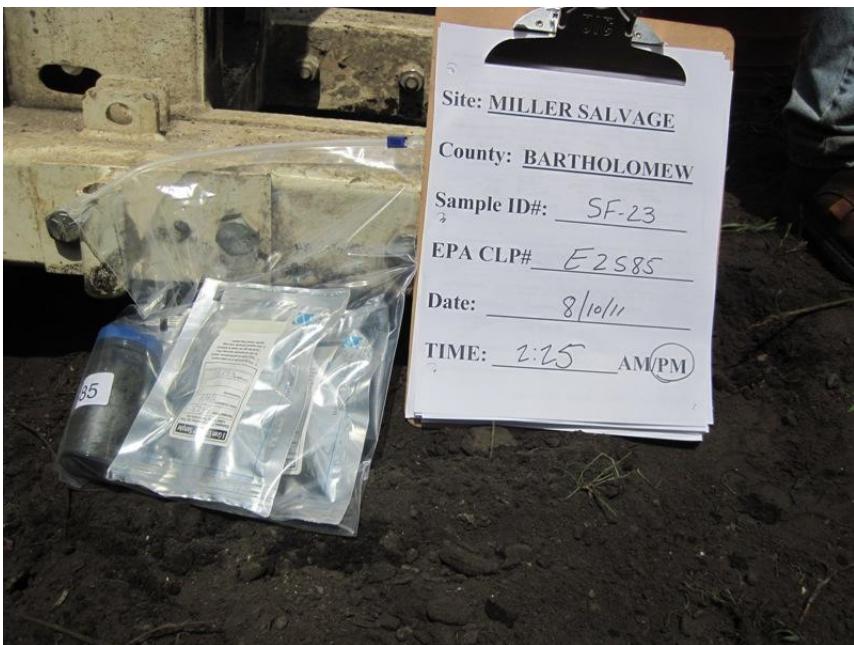
Sample No.: E2S85

Description: Sample taken for determination of possible source area contributing to ground water contamination from Miller Site

Photo By: Tim Johnson

Weather Conditions:

Hot, Sunny



Site: MILLER SALVAGE
County: BARTHOLOMEW
Sample ID#: SF-23
EPA CLP# E2S85
Date: 8/10/11
TIME: 2:25 AM/PM

SF-23
E2S85
7.5' bgs
Dark brown to black with strong odor



Site: Miller Salvage
Site No.: IND980607618
Location: GW-23

Non Responsive

Date: August 10, 2011
Sample No.: E2S86
Description: Ground water grab sample taken for determination of contamination on the Miller Site
Photo By: Tim Johnson
Weather Conditions: Hot, Sunny





Site: Miller Salvage
Site No.: IND980607618

Location: SF-24

Non Responsive

Date: August 10, 2011

Sample No.: E2S87

Description: Duplicate of SF-23 - Soil sample taken for determination of possible source area on the Miller Site

Photo By: Tim Johnson

Weather Conditions:

Hot, Sunny



**SF-24 duplicate of SF-23
E2S87**

7.5' bgs

Dark brown to black with strong odor



Site: Miller Salvage
Site No.: IND980607618

Location: GW-24

Non Responsive

Date: August 10, 2011

Sample No.: E2S88

Description: Duplicate of GW-23 - Ground water grab sample taken for determination of contamination on the Miller Site

Photo By: Tim Johnson

Weather Conditions:

Hot, Sunny



GW-24 - duplicate of GW-23

E2S88

15' bgs

Strong odor with sheen.



Site: Miller Salvage
Site No.: IND980607618

Location: SF-25

Non Responsive

Sample No.: E2S32
Description: Soil sample taken for determination of possible source area on the Miller Site
Photo By: Tim Johnson
Weather Conditions: Hot, Sunny



SF-25
E2S32
17' bgs
Poorly sorted sand



Site: Miller Salvage
Site No.: IND980607618
Location: GW-25

Non Responsive

Date: August 10, 2011
Sample No.: E2S33
Description: Ground water grab sample taken for determination of contamination on the Miller Site
Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



GW-25
E2S33
17.7' bgs
Turbid, no odor.



Site: Miller Salvage
Site No.: IND980607618
Location: SF-26

Non Responsive

Date: August 10, 2011
Sample No.: E2S28
Description: Soil sample taken for determination of possible source area on the Miller Site
Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



SF-26
E2S28
9' bgs
Brown, gravel, sand with silt



Site: Miller Salvage
Site No.: IND980607618
Location: GW-26

Non Responsive

Date: August 10, 2011
Sample No.: E2S29
Description: Ground water grab sample taken for determination of contaminant migration for the Miller Site
Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



GW-26
E2S29
9.5' bgs
Clear, no odor



Site: Miller Salvage
Site No.: IND980607618

Location: SF-27

Non Responsive

Date: August 10, 2011

Sample No.: E2S26

Description: Soil sample taken for determination of possible source area at the Miller Site

Photo By: Tim Johnson

**Weather Conditions:
Hot, Sunny**



SF-27
E2S26
13' bgs
Medium sand



Site: Miller Salvage
Site No.: IND980607618
Location: GW-27

Non Responsive

Date: August 10, 2011
Sample No.: E2S27
Description: Ground water grab sample taken for determination of contaminant migration for the Miller Site
Photo By: Tim Johnson
Weather Conditions: Hot, Sunny



GW-27
E2S27
13.5' bgs
Very turbid, no odor



Site: Miller Salvage
Site No.: IND980607618

Location: SF-28

Non Responsive

Date: August 10, 2011
Sample No.: E2S30
Description: Soil sample taken at suspected furthest southern extent of the former burn pit area on the Miller Site

Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



Site: MILLER SALVAGE
County: BARTHOLOMEW
Sample ID#: SF-28
EPA CLP# E2S30
Date: 8/10/11
TIME: 1135 (AMPM)

SF-28
E2S30
7.5' bgs
Poorly sorted sand with pebbles



Site: Miller Salvage
Site No.: IND980607618
Location: GW-28

Non Responsive

Date: August 10, 2011
Sample No.: E2S31
Description: Ground water grab sample taken for determination of contaminant migration for the Miller Site
Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



GW-28
E2S31
8' bgs
Very turbid, no odor



Site: Miller Salvage
Site No.: IND980607618
Location: GW-30

Non Responsive

Date: August 10, 2011
Sample No.: E2S70
Description: Ground water grab sample taken from spigot for determination of possible contaminant migration from the Miller Site
Photo By: Tim Johnson
Weather Conditions: Hot, Sunny



GW-30
E2S70
>80' bgs
Clear, no odor



**Municipal Well Sample
E2S11 for the Garden City Ground
Water Plume ESI at the same time
and location as Miller Salvage
Sample E2S70**

**Site: Garden City
Ground Water Plume
Site No.: IND000508642
Location: GW-30**

Non Responsive

**Date: August 9, 2011
Sample No.: E2S11
Description: Sample taken to
establish targets for TCE
contaminated ground water.**

**Photo By: Mark Jaworski
Weather Conditions: Hot, Sunny**



**GW-30
E2S11
Wellhead spigot
>90' bgs
Clear, no odor**



Site: Miller Salvage
Site No.: IND980607618
Location: GW-31

Non Responsive

Date: August 10, 2011
Sample No.: E2S71
Description: Ground water grab sample taken for spigot for determination of possible contaminant migration from the Miller Site
Photo By: Tim Johnson
Weather Conditions:
Hot, Sunny



GW-31
E2S71
>80' bgs
Clear, no odor

**Municipal Well Sample
E2S51 taken for the Garden City
Ground Water Plume ESI at the
same time and location as
Miller Salvage Sample E2S71**



**Site: Garden City
Ground Water Plume
Site No.: IND000508642
Location: GW-31**

Non Responsive

**Date: August 9, 2011
Sample No.: E2S51
Description: Sample taken to establish targets for TCE contaminated ground water.
Photo By: Mark Jaworski
Weather Conditions: Hot, Sunny**



**GW-31
E2S51
Wellhead spigot
>90' bgs
Clear, no odor**

ATTACHMENT D
SAMPLE DATA GROUPS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE:

SUBJECT: Review of Data
Received for Review on: 2 September 2011

FROM: Timothy Prendiville, Supervisor (SR-6J)
Superfund Contract Management Section

TO: Data User: IDEM
Email address: mjaworsk@idem.in.gov; dchester@idem.in.gov

Level 3 Data Validation

We have reviewed the data for the following case:

SITE Name: Miller Salvage (IN)

Case Number: 41646 SDG Number: E2S20

Number and Type of Samples: 13 Water Samples (Volatile)

Sample Numbers: E2S20, E2S24, E2S25, E2S27, E2S29, E2S31, E2S33, E2S70, E2S71,
E2S86, E2S88, E2S90, E2SB4

Laboratory: A4 Scientific Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: **SA-5J**

Case Number: 41646

SDG Number: E2S20

Site Name: Miller Salvage (IN)

Laboratory: A4 Scientific

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Thirteen (13) preserved water samples labeled E2S20, E2S24, E2S25, E2S27, E2S29, E2S31, E2S33, E2S70, E2S71, E2S86, E2S88, E2S90, E2SB4 were shipped to A4 Scientific located in The Woodlands, TX. All samples were collected 8/9/11 and 8/10/11 and received 8/10/11 and 8/11/11 intact and properly cooled.

All samples were analyzed for the Volatile list of compounds. All samples were analyzed according to CLP SOW SOM01.2 (8/2007) and reviewed according to the NFG for SOM01.2 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.6).

Sample E2SB4 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

No samples were identified as field blanks or duplicates.

1. HOLDING TIME

No problems were found.

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found.

3. CALIBRATION

The following volatile samples are associated with an initial calibration percent relative standard deviation (%RSD) outside criteria. Detected compounds are qualified "J". Non-detected compounds are not qualified unless qualified for another criteria.

E2S20, E2S70, E2S71, E2SB4 E2SB4MS, E2SB4MSD, VBLK28Q
Vinyl chloride, 1,2,3-Trichlorobenzene

E2S24, E2S25, E2S27, E2S29, E2S31, E2S33, E2S86, E2S88, E2S90, VBLKIU,
VBLKIV, VHBLK27E
Vinyl chloride, Carbon tetrachloride

The following volatile samples are associated with an opening continuing calibration percent difference (%D) outside criteria. Detected compounds are qualified "J". Sample result is non-detected compound qualified "UJ".

Vinyl chloride, Bromomethane
VBLK1V, VHBLK27E

4. BLANKS

The following volatile samples have analyte concentrations reported less than the CRQL. The associated method blank concentration is less than the concentration criteria. Detected compounds concentrations have been elevated to the CRQL and are qualified "U". The compounds are not detected in any of the samples. Non-detected compounds are qualified not qualified.

E2S20, E2S24, E2S25, E2S27, E2S29, E2S31, E2S33, E2S70, E2S71, E2S86, E2S88,
E2S90, E2SB4, E2SB4MS, E2SB4MSD
1,2,4-Trichlorobenzene, 1,2,3,-Trichlorobenzene

The following volatile samples have common contaminant analyte concentrations reported less than 2x the CRQL. The associated method blank common contaminant concentration is less than 2x the concentration criteria. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to 2X the CRQL. Some non-detected compounds are ultimately qualified UJ" for surrogate criterion.

Methylene chloride
E2S20, E2S70, E2S71, E2SB4, E2SB4MS, E2SB4MSD

The following volatile samples have TIC concentrations reported less than 5X the method blank concentration. Detected compounds are qualified "U" and deleted from the TIC report.

Unknown @ 1.15
VHBLK27E

5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY

The following volatile samples have DMC/SMC recoveries above the upper limit of the criteria window. Detected compounds are qualified "J". Non-detected compounds are not qualified.

E2S20, E2S25, E2S27, E2S29, E2S88
Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Carbon disulfide

E2S33
Vinyl chloride

E2S70, E2S71, E2SB4
Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon disulfide

E2S86
1,1,2,2-Tetrachloroethane, 1,2-Dibromo-3-chloropropane

E2SB4MS, E2SB4MSD
Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon disulfide, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No problems were found.

6B. LABORATORY CONTROL SAMPLE

Not applicable to this analysis.

7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as field blanks or duplicates.

8. INTERNAL STANDARDS

No problems were found.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all volatile and semivolatile compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E2S24

Chloroform

E2S29, E2S31

Acetone, cis-1,2-Dichloroethene, Trichloroethene

E2S33

Chloromethane, Acetone, cis-1,2-Dichloroethene, Chloroform, Toluene

E2S86, E2S88

Chloromethane, Acetone, cis-1,2-Dichloroethene, Methylcyclohexane

E2S90

Chloromethane

VBLK1U

1,2,4-Trichlorobenzene, 1,2,3,-Trichlorobenzene

VBLK1V

Methylene Chloride

VBLK28Q

Methylene Chloride, 1,2,4-Trichlorobenzene, 1,2,3,-Trichlorobenzene

A library search indicates a match at or above 85% for a TIC compound in the volatile sample. Detected compounds are qualified "NJ".

CAS No. 95-93-2 Benzene, 1,2,4,5-tetramethyl-

CAS No. 767-58-8 Indan, 1-methyl-

E2S86, E2S88

Case Number: 41646

SDG Number: E2S20

Site Name: Miller Salvage (IN)

Laboratory: A4 Scientific

CAS No. 103-65-1 Benzene, propyl-
CAS No. 141-93-5 Benzene, 1,3-diethyl-
CAS No. 527-53-7 Benzene, 1,2,3,5-tetramethyl-
CAS No. 2958-75-0 1-Methyldecahydronaphthalene
CAS No. 2958-76-1 Naphthalene, decahydro-2-me...
E2S86

CAS No. 135-01-3 Benzene, 1,2-diethyl-
CAS No. 527-84-4 Benzene, 1-methyl-2-(1-meth...
CAS No. 874-41-9 Benzene, 1-ethyl-2,4-dimethyl-
CAS No. 3728-56-1 1-Ethyl-4-methylcyclohexane
E2S88

A library search indicates a match below 85% for a TIC compound in the volatile samples.
Detected compounds are qualified "J".

Unknown @ 10.65
Unknown @ 11.85
E2S86, E2S88

Unknown @ 11.09
E2S86

Unknown @ 11.32
Unknown @ 11.69
Unknown @ 14.11
E2S88

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

The following volatile samples had alkanes improperly listed on the Form I TICs. They were removed by the reviewer.

Unknown @ 11.32, Unknown @ 13.13
E2S86

The following volatile samples library search reports have unknowns not reported on the Form I TIC Report. They were added to the report by the reviewer.

Unknown @ 10.65, Unknown @ 11.09
E2S86

Reviewed by: Matthew A. Kobus/Techlaw-ESAT
Date: September 30, 2011

CADRE Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

Sample Summary Report

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S20	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0006	pH:	2.0	Sample Date:	08092011	Sample Time:	08:00:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichloromethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S24	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0007	pH:	2.0	Sample Date:	08102011	Sample Time:	08:00:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	21	ug/L	1.0			Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	7.0	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	1.4	ug/L	1.0	J	J	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S25	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0008	pH:	2.0	Sample Date:	08102011	Sample Time:	08:00:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	16	ug/L	1.0			Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	7.1	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S27	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0009	pH:	2.0	Sample Date:	08102011	Sample Time:	10:30:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	16	ug/L	1.0			Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	5.3	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S29	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0010	pH:	2.0	Sample Date:	08102011	Sample Time:	11:00:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	9.3	ug/L	1.0	J	J	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	6.7	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	3.7	ug/L	1.0	J	J	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	3.0	ug/L	1.0	J	J	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S31	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0012	pH:	2.0	Sample Date:	08102011	Sample Time:	11:50:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	4.5	ug/L	1.0	J	J	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	6.2	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	1.2	ug/L	1.0	J	J	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	1.8	ug/L	1.0	J	J	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S33	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0011	pH:	2.0	Sample Date:	08102011	Sample Time:	12:50:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	2.2	ug/L	1.0	J	J	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	9.8	ug/L	1.0	J	J	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	7.7	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	1.2	ug/L	1.0	J	J	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	1.6	ug/L	1.0	J	J	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	1.3	ug/L	1.0	J	J	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S70	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0001	pH:	2.0	Sample Date:	08092011	Sample Time:	15:10:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S71	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0002	pH:	2.0	Sample Date:	08092011	Sample Time:	15:30:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S86	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0013	pH:	2.0	Sample Date:	08102011	Sample Time:	14:35:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	1.1	ug/L	1.0	J	J	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.6	ug/L	1.0			Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	6.6	ug/L	1.0	J	J	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	7.4	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	1.4	ug/L	1.0	J	J	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	1.2	ug/L	1.0	J	J	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	14	ug/L	1.0			Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Total Alkane TICs			1.0	J		Yes	
Benzene, propyl-			1.0	JN		Yes	
Benzene, 1,3-diethyl-			1.0	JN		Yes	
Benzene, 1,2,4,5-tetramethyl- (01)			1.0	JN		Yes	
Indan, 1-methyl-			1.0	JN		Yes	
Benzene, 1,2,3,5-tetramethyl-			1.0	JN		Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Naphthalene, decahydro-2- me...			1.0	JN		Yes	
Benzene, 1,2,4,5- tetramethyl- (02)			1.0	JN		Yes	
Benzene, 1,2,4,5- tetramethyl- (02)			1.0	JN		Yes	
1- Methyldecahydr onaphthalene			1.0	JN		Yes	
Benzene, 1,2,4,5- tetramethyl- (01)			1.0	JN		Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S88	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0014	pH:	2.0	Sample Date:	08102011	Sample Time:	14:45:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	1.2	ug/L	1.0	J	J	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	6.2	ug/L	1.0		J	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	6.0	ug/L	1.0	J	J	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	5.7	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	1.4	ug/L	1.0	J	J	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	1.2	ug/L	1.0	J	J	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	12	ug/L	1.0			Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Benzene, 1-methyl-2-(1-meth...			1.0	JN		Yes	
Benzene, 1,2-diethyl-			1.0	JN		Yes	
1-Ethyl-4-methylcyclohexane (O2)			1.0	JN		Yes	
1-Ethyl-4-methylcyclohexane (O2)			1.0	JN		Yes	
Total Alkane TICs			1.0	J		Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1-Ethyl-4-methylcyclohexane (01)			1.0	JN		Yes	
Indan, 1-methyl-			1.0	JN		Yes	
Benzene, 1-ethyl-2,4-dimethyl-			1.0	JN		Yes	
Benzene, 1,2,4,5-tetramethyl-			1.0	JN		Yes	
1-Ethyl-4-methylcyclohexane (01)			1.0	JN		Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2S90	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0015	pH:	2.0	Sample Date:	08102011	Sample Time:	15:50:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	1.5	ug/L	1.0	J	J	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	19	ug/L	1.0			Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	6.5	ug/L	1.0			Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2SB4	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0003	pH:	2.0	Sample Date:	08092011	Sample Time:	16:35:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2SB4MS	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0003	pH:	2.0	Sample Date:	08092011	Sample Time:	16:35:00
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	58	ug/L	1.0		J	Yes	
Benzene	57	ug/L	1.0			Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Trichloroethene	57	ug/L	1.0			Yes	
Toluene	55	ug/L	1.0			Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	49	ug/L	1.0			Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichloromethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	E2SB4MSD	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0003	pH:	2.0	Sample Date:	08092011	Sample Time:	16:35:00
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	56	ug/L	1.0		J	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Benzene	58	ug/L	1.0			Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Trichloroethene	57	ug/L	1.0			Yes	
Toluene	56	ug/L	1.0			Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	50	ug/L	1.0			Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	10	ug/L	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichloromethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	VBLK1U	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	5.0	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	3.2	ug/L	1.0	J	J	Yes	
1,2,3-Trichlorobenzene	4.7	ug/L	1.0	J	J	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	VBLK1V	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	UJ	Yes	
Bromomethane	5.0	ug/L	1.0	U	UJ	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluoromethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	4.8	ug/L	1.0	J	J	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	VBLK28Q	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	U	Yes	
Bromomethane	5.0	ug/L	1.0	U	U	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluoromethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	2.3	ug/L	1.0	J	J	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	2.2	ug/L	1.0	J	J	Yes	
1,2,3-Trichlorobenzene	2.7	ug/L	1.0	J	J	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2S20	Lab Code:	A4
Sample Number:	VHBLK27E	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:	7.0	Sample Date:	08102011	Sample Time:	00:00:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/L	1.0	U	U	Yes	
Chloromethane	5.0	ug/L	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/L	1.0	U	UJ	Yes	
Bromomethane	5.0	ug/L	1.0	U	UJ	Yes	
Chloroethane	5.0	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/L	1.0	U	U	Yes	
Acetone	10	ug/L	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/L	1.0	U	U	Yes	
Methyl acetate	5.0	ug/L	1.0	U	U	Yes	
Methylene chloride	5.0	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Butanone	10	ug/L	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/L	1.0	U	U	Yes	
Chloroform	5.0	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Cyclohexane	5.0	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/L	1.0	U	U	Yes	
Benzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/L	1.0	U	U	Yes	
1,4-Dioxane	100	ug/L	1.0	U	U	Yes	
Trichloroethene	5.0	ug/L	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/L	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/L	1.0	U	U	Yes	
2-Hexanone	10	ug/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/L	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/L	1.0	U	U	Yes	
o-Xylene	5.0	ug/L	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/L	1.0	U	U	Yes	
Styrene	5.0	ug/L	1.0	U	U	Yes	
Bromoform	5.0	ug/L	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/L	1.0	U	U	Yes	

Edit History Report

Case No: 41646

Contract: EPW10018

SDG No: E2S20

Lab Code: A4

Method: VOA_Low_Med

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E2S20	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:09 PM	
E2S70	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:10 PM	
E2S71	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:11 PM	
E2SB4	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:12 PM	
E2SB4MS	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:13 PM	
E2SB4MSD	Water	Methylene chloride	Validated Result	5.0	10	Matthew Kobus	9/29/11 12:14 PM	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE:

SUBJECT: Review of Data
Received for Review on: 2 September 2011

FROM: Timothy Prendiville, Supervisor (SR-6J)
Superfund Contract Management Section

TO: Data User: IDEM
mjworsk@idem.IN.gov
Level 3 Data Validation

We have reviewed the data for the following case:

SITE Name: Miller Salvage (IN)

Case Number: 41646 SDG Number: E2SB3

Number and Type of Samples: 8 Soil Samples (Volatile)

Sample Numbers: E2S26, E2S28, E2S30, E2S32, E2S85, E2S87, E2S89, E2SB3

Laboratory: A4 Scientific Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: **SA-5J**

Case Number: 41646

SDG Number: E2SB3

Site Name: Miller Salvage (IN)

Laboratory: A4 Scientific

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eight (8) soil samples labeled E2S26, E2S28, E2S30, E2S32, E2S85, E2S87, E2S89 and E2SB3, were shipped to A4 Scientific located in The Woodlands, TX. All samples were collected 8/9/11 and 8/10/11 and received 8/10/11 and 8/11/11 intact and properly cooled.

All samples were analyzed for the Volatile list of compounds. All samples were analyzed according to CLP SOW SOM01.2 (8/2007) and reviewed according to the NFG for SOM01.2 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.6).

Sample E2SB3 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

No samples were identified as field blanks or field duplicates.

Case Number: 41646
Site Name: Miller Salvage (IN)

SDG Number: E2SB3
Laboratory: A4 Scientific

1. HOLDING TIME

No Problems Found.

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No Problems Found.

3. CALIBRATION

The following volatile samples are associated with an initial calibration percent relative standard deviation (%RSD) outside criteria. Detected compounds are qualified "J". Non-detected compounds are not qualified unless qualified for another criteria.

E2S26, E2S28, E2S30, E2S32, E2S85, E2S87, E2S89, E2SB3, E2SB3MS, E2SB3MSD,
VBLK08, VBLK33, VHBLK27F
Bromomethane, 1,2,3-Trichlorobenzene

The following volatile samples are associated with an opening continuing calibration percent difference (%D) outside criteria. Detected compounds are qualified "J". Non-detected compounds are qualified "UJ".

E2S26, E2S28, E2S30, E2S32, E2S85, E2S87, E2S89, E2SB3, E2SB3MS, E2SB3MSD,
VBLK08, VBLK33, VHBLK27F
1,2,3-Trichlorobenzene

4. BLANKS

The following volatile samples have common contaminant analyte concentrations reported less than 2x the CRQL. The associated method blank has common contaminant analyte concentration less than 2x the concentration criteria. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to 2x the CRQL.

Methylene chloride
E2S26, E2S28, E2S30, E2S32, E2S85, E2S87, E2S89, E2SB3, E2SB3MS, E2SB3MSD

5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY

No Problems Found.

6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample E2SB3 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses. No Problems Found.

6B. LABORATORY CONTROL SAMPLE

Not applicable to volatile analyses.

7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as field blanks or field duplicates.

8. INTERNAL STANDARDS

No Problems Found.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all volatile compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E2S85, E2S87
Isopropylbenzene

VBLK08
Methylene chloride, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

A library search indicates a match below 85% for a TIC compound in the volatile sample. Detected compounds are qualified "J".

Unknown @ 10.26; Unknown @ 12.23; Unknown @ 12.56; Unknown @ 13.86;
Unknown @ 14.16
E2S85

Unknown @ 11.08; Unknown @ 12.45; Unknown @ 14.33
E2S87

Unknown @ 11.61; Unknown @ 12.38; Unknown @ 12.63; Unknown @ 12.76;
Unknown @ 12.91; Unknown @ 13.08; Unknown @ 13.41; Unknown @ 13.50;
Unknown @ 14.02; Unknown @ 14.09
E2S85, E2S87

Unknown @ 16.63
VBLK08

Case Number: 41646

SDG Number: E2SB3

Site Name: Miller Salvage (IN)

Laboratory: A4 Scientific

A library search indicates a match at or above 85% for a TIC compound in the volatile sample.
Detected compounds are qualified "NJ".

CAS No. 95-93-2 Benzene, 1,2,4,5-tetramethyl
CAS No. 1758-88-9 Benzene, 2-ethyl-1,4-dimethyl
CAS No. 2958-76-1 Naphthalene, decahydro-2-me.
E2S87

CAS No. 527-53-7 Benzene, 1,2,3,5-tetramethyl
CAS No. 527-84-4 Benzene, 1-methyl-2-(1-meth-
CAS No. 767-58-8 Indan, 1-methyl-
CAS No. 934-80-5 Benzene, 4-ethyl-1,2-dimethyl
CAS No. 56253-64-6 Benzene, (2-methyl-1-butene-
CAS No. 1000152-47-3 trans-Decalin, 2-methyl-
E2S85

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

For sample E2S85, two Unknown TICs, Unknown @ 10.26 and Unknown @ 12.56, were not reported on the Form I VOA-TIC.

Unknown @ 1.69 was identified by the analyst as Carbon dioxide in sample E2S87. It was reported on the Form I VOA-TIC. The Reviewer has deleted it from the TIC report.

The following volatile samples have a compound identified by CAS No. in some samples and as an Unknown TIC in other samples. A comparison of the chromatograms demonstrated that the same compound was present in the respective samples. Copies of the chromatograms are included with the validation report.

Unknown @ 14.33
E2S87
versus
CAS No. 1000152-47-3 trans-Decalin, 2-methyl-
E2S85

The Trace Volatile Sample Summary Reports does not include the TICs with no CAS Numbers. Please refer to the TIC Report – NFG #9 for a complete list of the TICs associated with following samples.

E2S85, E2S87, VBLK08

CADRE Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

Sample Summary Report

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S26	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0006	pH:		Sample Date:	08102011	Sample Time:	10:20:00
% Moisture :	5.90			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.2	ug/kg	1.0	U	U	Yes	
Chloromethane	7.2	ug/kg	1.0	U	U	Yes	
Vinyl chloride	7.2	ug/kg	1.0	U	U	Yes	
Bromomethane	7.2	ug/kg	1.0	U	U	Yes	
Chloroethane	7.2	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	7.2	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	7.2	ug/kg	1.0	U	U	Yes	
Acetone	14	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	7.2	ug/kg	1.0	U	U	Yes	
Methyl acetate	7.2	ug/kg	1.0	U	U	Yes	
Methylene chloride	14	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	7.2	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	7.2	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	
2-Butanone	14	ug/kg	1.0	U	U	Yes	
Bromochloromethane	7.2	ug/kg	1.0	U	U	Yes	
Chloroform	7.2	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	7.2	ug/kg	1.0	U	U	Yes	
Cyclohexane	7.2	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	7.2	ug/kg	1.0	U	U	Yes	
Benzene	7.2	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	7.2	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	140	ug/kg	1.0	U	U	Yes	
Trichloroethene	7.2	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Methylcyclohexane	7.2	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	7.2	ug/kg	1.0	U	U	Yes	
Bromodichloromethane	7.2	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	7.2	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	14	ug/kg	1.0	U	U	Yes	
Toluene	7.2	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	7.2	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	7.2	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	7.2	ug/kg	1.0	U	U	Yes	
2-Hexanone	14	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	7.2	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	7.2	ug/kg	1.0	U	U	Yes	
Chlorobenzene	7.2	ug/kg	1.0	U	U	Yes	
Ethylbenzene	7.2	ug/kg	1.0	U	U	Yes	
o-Xylene	7.2	ug/kg	1.0	U	U	Yes	
m,p-Xylene	7.2	ug/kg	1.0	U	U	Yes	
Styrene	7.2	ug/kg	1.0	U	U	Yes	
Bromoform	7.2	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	7.2	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethene	7.2	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	7.2	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	7.2	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S28	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0008	pH:		Sample Date:	08102011	Sample Time:	10:45:00
% Moisture :	6.61			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.4	ug/kg	1.0	U	U	Yes	
Chloromethane	5.4	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.4	ug/kg	1.0	U	U	Yes	
Bromomethane	5.4	ug/kg	1.0	U	U	Yes	
Chloroethane	5.4	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	5.4	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.4	ug/kg	1.0	U	U	Yes	
Acetone	11	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.4	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.4	ug/kg	1.0	U	U	Yes	
Methylene chloride	11	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.4	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.4	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
2-Butanone	11	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.4	ug/kg	1.0	U	U	Yes	
Chloroform	5.4	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.4	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.4	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.4	ug/kg	1.0	U	U	Yes	
Benzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.4	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	110	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.4	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.4	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.4	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.4	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.4	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	11	ug/kg	1.0	U	U	Yes	
Toluene	5.4	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.4	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.4	ug/kg	1.0	U	U	Yes	
2-Hexanone	11	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.4	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.4	ug/kg	1.0	U	U	Yes	
o-Xylene	5.4	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.4	ug/kg	1.0	U	U	Yes	
Styrene	5.4	ug/kg	1.0	U	U	Yes	
Bromoform	5.4	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.4	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.4	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.4	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S30	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0010	pH:		Sample Date:	08102011	Sample Time:	11:35:00
% Moisture :	5.09			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.0	ug/kg	1.0	U	U	Yes	
Chloromethane	6.0	ug/kg	1.0	U	U	Yes	
Vinyl chloride	6.0	ug/kg	1.0	U	U	Yes	
Bromomethane	6.0	ug/kg	1.0	U	U	Yes	
Chloroethane	6.0	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	ug/kg	1.0	U	U	Yes	
Acetone	12	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	6.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	6.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	12	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Butanone	12	ug/kg	1.0	U	U	Yes	
Bromochloromethane	6.0	ug/kg	1.0	U	U	Yes	
Chloroform	6.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	6.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	6.0	ug/kg	1.0	U	U	Yes	
Benzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	120	ug/kg	1.0	U	U	Yes	
Trichloroethene	6.0	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	6.0	ug/kg	1.0	U	U	Yes	
Bromodichlorom	6.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	12	ug/kg	1.0	U	U	Yes	
Toluene	6.0	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	12	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	6.0	ug/kg	1.0	U	U	Yes	
Chlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	6.0	ug/kg	1.0	U	U	Yes	
o-Xylene	6.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	6.0	ug/kg	1.0	U	U	Yes	
Styrene	6.0	ug/kg	1.0	U	U	Yes	
Bromoform	6.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	6.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	6.0	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S32	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0012	pH:		Sample Date:	08102011	Sample Time:	12:45:00
% Moisture :	9.03			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.9	ug/kg	1.0	U	U	Yes	
Chloromethane	6.9	ug/kg	1.0	U	U	Yes	
Vinyl chloride	6.9	ug/kg	1.0	U	U	Yes	
Bromomethane	6.9	ug/kg	1.0	U	U	Yes	
Chloroethane	6.9	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	6.9	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.9	ug/kg	1.0	U	U	Yes	
Acetone	14	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	6.9	ug/kg	1.0	U	U	Yes	
Methyl acetate	6.9	ug/kg	1.0	U	U	Yes	
Methylene chloride	14	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	6.9	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	6.9	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	
2-Butanone	14	ug/kg	1.0	U	U	Yes	
Bromochloromethane	6.9	ug/kg	1.0	U	U	Yes	
Chloroform	6.9	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	6.9	ug/kg	1.0	U	U	Yes	
Cyclohexane	6.9	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	6.9	ug/kg	1.0	U	U	Yes	
Benzene	6.9	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	6.9	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	140	ug/kg	1.0	U	U	Yes	
Trichloroethene	6.9	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	6.9	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	6.9	ug/kg	1.0	U	U	Yes	
Bromodichlorom	6.9	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.9	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	6.9	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	14	ug/kg	1.0	U	U	Yes	
Toluene	6.9	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	6.9	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	6.9	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	6.9	ug/kg	1.0	U	U	Yes	
2-Hexanone	14	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	6.9	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	6.9	ug/kg	1.0	U	U	Yes	
Chlorobenzene	6.9	ug/kg	1.0	U	U	Yes	
Ethylbenzene	6.9	ug/kg	1.0	U	U	Yes	
o-Xylene	6.9	ug/kg	1.0	U	U	Yes	
m,p-Xylene	6.9	ug/kg	1.0	U	U	Yes	
Styrene	6.9	ug/kg	1.0	U	U	Yes	
Bromoform	6.9	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	6.9	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	6.9	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	6.9	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	6.9	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S85	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0014	pH:		Sample Date:	08102011	Sample Time:	14:25:00
% Moisture :	20.02			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.7	ug/kg	1.0	U	U	Yes	
Chloromethane	6.7	ug/kg	1.0	U	U	Yes	
Vinyl chloride	6.7	ug/kg	1.0	U	U	Yes	
Bromomethane	6.7	ug/kg	1.0	U	U	Yes	
Chloroethane	6.7	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	6.7	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	6.7	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.7	ug/kg	1.0	U	U	Yes	
Acetone	36	ug/kg	1.0			Yes	
Carbon Disulfide	6.7	ug/kg	1.0	U	U	Yes	
Methyl acetate	6.7	ug/kg	1.0	U	U	Yes	
Methylene chloride	13	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	6.7	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	6.7	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	6.7	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	6.7	ug/kg	1.0	U	U	Yes	
2-Butanone	13	ug/kg	1.0	U	U	Yes	
Bromochloromethane	6.7	ug/kg	1.0	U	U	Yes	
Chloroform	6.7	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	6.7	ug/kg	1.0	U	U	Yes	
Cyclohexane	6.7	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	6.7	ug/kg	1.0	U	U	Yes	
Benzene	6.7	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	6.7	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	130	ug/kg	1.0	U	U	Yes	
Trichloroethene	6.7	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	6.7	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	6.7	ug/kg	1.0	U	U	Yes	
Bromodichlorom	6.7	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.7	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	6.7	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	13	ug/kg	1.0	U	U	Yes	
Toluene	6.7	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	6.7	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	6.7	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	6.7	ug/kg	1.0	U	U	Yes	
2-Hexanone	13	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	6.7	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	6.7	ug/kg	1.0	U	U	Yes	
Chlorobenzene	6.7	ug/kg	1.0	U	U	Yes	
Ethylbenzene	6.7	ug/kg	1.0	U	U	Yes	
o-Xylene	6.7	ug/kg	1.0	U	U	Yes	
m,p-Xylene	6.7	ug/kg	1.0	U	U	Yes	
Styrene	6.7	ug/kg	1.0	U	U	Yes	
Bromoform	6.7	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	3.5	ug/kg	1.0	J	J	Yes	
1,1,2,2-Tetrachloroethane	6.7	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	6.7	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	6.7	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	6.7	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	6.7	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	6.7	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	6.7	ug/kg	1.0	U	UJ	Yes	
Total Alkane TICs	1100	ug/kg	1.0	J	J	Yes	
Benzene, 1-methyl-2-(1-meth...	170	ug/kg	1.0	JN	JN	Yes	
Benzene, 1,2,3,5-tetramethyl-	25	ug/kg	1.0	JN	JN	Yes	
trans-Decalin, 2-methyl-	41	ug/kg	1.0	JN	JN	Yes	
Benzene, 4-ethyl-1,2-dimethyl- (O2)	90	ug/kg	1.0	JN	JN	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Indan, 1-methyl-	15	ug/kg	1.0	JN	JN	Yes	
Benzene, (2-methyl-1-butenyl)-	13	ug/kg	1.0	JN	JN	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S87	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0016	pH:		Sample Date:	08102011	Sample Time:	14:30:00
% Moisture :	19.96			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	9.1	ug/kg	1.0	U	U	Yes	
Chloromethane	9.1	ug/kg	1.0	U	U	Yes	
Vinyl chloride	9.1	ug/kg	1.0	U	U	Yes	
Bromomethane	9.1	ug/kg	1.0	U	U	Yes	
Chloroethane	9.1	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	9.1	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	9.1	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.1	ug/kg	1.0	U	U	Yes	
Acetone	270	ug/kg	1.0			Yes	
Carbon Disulfide	9.1	ug/kg	1.0	U	U	Yes	
Methyl acetate	9.1	ug/kg	1.0	U	U	Yes	
Methylene chloride	18	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	9.1	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	9.1	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	9.1	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	9.1	ug/kg	1.0	U	U	Yes	
2-Butanone	54	ug/kg	1.0			Yes	
Bromochloromethane	9.1	ug/kg	1.0	U	U	Yes	
Chloroform	9.1	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	9.1	ug/kg	1.0	U	U	Yes	
Cyclohexane	9.1	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	9.1	ug/kg	1.0	U	U	Yes	
Benzene	9.1	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	9.1	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	180	ug/kg	1.0	U	U	Yes	
Trichloroethene	9.1	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	9.1	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	9.1	ug/kg	1.0	U	U	Yes	
Bromodichlorom	9.1	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	9.1	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	9.1	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	18	ug/kg	1.0	U	U	Yes	
Toluene	9.1	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	9.1	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	9.1	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	9.1	ug/kg	1.0	U	U	Yes	
2-Hexanone	18	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	9.1	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	9.1	ug/kg	1.0	U	U	Yes	
Chlorobenzene	9.1	ug/kg	1.0	U	U	Yes	
Ethylbenzene	9.1	ug/kg	1.0	U	U	Yes	
o-Xylene	9.1	ug/kg	1.0	U	U	Yes	
m,p-Xylene	9.1	ug/kg	1.0	U	U	Yes	
Styrene	9.1	ug/kg	1.0	U	U	Yes	
Bromoform	9.1	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	8.4	ug/kg	1.0	J	J	Yes	
1,1,2,2-Tetrachloroethane	9.1	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	9.1	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	9.1	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	9.1	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	9.1	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	9.1	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	9.1	ug/kg	1.0	U	UJ	Yes	
Benzene, 1,2,4,5-tetramethyl- (01)	95	ug/kg	1.0	JN	JN	Yes	
Naphthalene, decahydro-2-methyl- (01)	2700	ug/kg	1.0	JN	J	Yes	
Benzene, 1,2,4,5-tetramethyl- (02)			1.0	JN		No	
Benzene, 2-ethyl-1,4-dimethyl-	250	ug/kg	1.0	JN	JN	Yes	
Total Alkane TICs			1.0	J		No	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzene, 1,2,4,5- tetramethyl- (02)	130	ug/kg	1.0	JN	JN	Yes	
Benzene, 1,2,4,5- tetramethyl- (01)	34	ug/kg	1.0	JN	JN	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2S89	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0018	pH:		Sample Date:	08102011	Sample Time:	15:50:00
% Moisture :	13.61			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.4	ug/kg	1.0	U	U	Yes	
Chloromethane	5.4	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.4	ug/kg	1.0	U	U	Yes	
Bromomethane	5.4	ug/kg	1.0	U	U	Yes	
Chloroethane	5.4	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	5.4	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.4	ug/kg	1.0	U	U	Yes	
Acetone	11	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.4	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.4	ug/kg	1.0	U	U	Yes	
Methylene chloride	11	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.4	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.4	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.4	ug/kg	1.0	U	U	Yes	
2-Butanone	11	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.4	ug/kg	1.0	U	U	Yes	
Chloroform	5.4	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.4	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.4	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.4	ug/kg	1.0	U	U	Yes	
Benzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.4	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	110	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.4	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.4	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.4	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.4	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.4	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	11	ug/kg	1.0	U	U	Yes	
Toluene	5.4	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.4	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.4	ug/kg	1.0	U	U	Yes	
2-Hexanone	11	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.4	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.4	ug/kg	1.0	U	U	Yes	
o-Xylene	5.4	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.4	ug/kg	1.0	U	U	Yes	
Styrene	5.4	ug/kg	1.0	U	U	Yes	
Bromoform	5.4	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.4	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.4	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.4	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.4	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.4	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2SB3	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0004	pH:		Sample Date:	08092011	Sample Time:	16:15:00
% Moisture :	20.61			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.9	ug/kg	1.0	U	U	Yes	
Chloromethane	5.9	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.9	ug/kg	1.0	U	U	Yes	
Bromomethane	5.9	ug/kg	1.0	U	U	Yes	
Chloroethane	5.9	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	5.9	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.9	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.9	ug/kg	1.0	U	U	Yes	
Acetone	12	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.9	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.9	ug/kg	1.0	U	U	Yes	
Methylene chloride	12	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	5.9	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.9	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.9	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.9	ug/kg	1.0	U	U	Yes	
2-Butanone	12	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.9	ug/kg	1.0	U	U	Yes	
Chloroform	5.9	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.9	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.9	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.9	ug/kg	1.0	U	U	Yes	
Benzene	5.9	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.9	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	120	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.9	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.9	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.9	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.9	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.9	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.9	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	12	ug/kg	1.0	U	U	Yes	
Toluene	5.9	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.9	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.9	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.9	ug/kg	1.0	U	U	Yes	
2-Hexanone	12	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.9	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.9	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.9	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.9	ug/kg	1.0	U	U	Yes	
o-Xylene	5.9	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.9	ug/kg	1.0	U	U	Yes	
Styrene	5.9	ug/kg	1.0	U	U	Yes	
Bromoform	5.9	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.9	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.9	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.9	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.9	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.9	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.9	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.9	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.9	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2SB3MS	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0004	pH:		Sample Date:	08092011	Sample Time:	16:15:00
% Moisture :	20.61			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	57	ug/kg	1.0			Yes	
Benzene	59	ug/kg	1.0			Yes	
Chloromethane	6.0	ug/kg	1.0	U	U	Yes	
Trichloroethene	56	ug/kg	1.0			Yes	
Vinyl chloride	6.0	ug/kg	1.0	U	U	Yes	
Bromomethane	6.0	ug/kg	1.0	U	U	Yes	
Toluene	57	ug/kg	1.0			Yes	
Chlorobenzene	57	ug/kg	1.0			Yes	
Chloroethane	6.0	ug/kg	1.0	U	U	Yes	
Trichlorofluoromethane	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	ug/kg	1.0	U	U	Yes	
Acetone	12	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	6.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	6.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	12	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Butanone	12	ug/kg	1.0	U	U	Yes	
Bromoform	6.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	6.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	120	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	6.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	6.0	ug/kg	1.0	U	U	Yes	
Bromodichloromethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	12	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	12	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	6.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	6.0	ug/kg	1.0	U	U	Yes	
o-Xylene	6.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	6.0	ug/kg	1.0	U	U	Yes	
Styrene	6.0	ug/kg	1.0	U	U	Yes	
Bromoform	6.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	6.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	6.0	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	E2SB3MSD	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	S-0004	pH:		Sample Date:	08092011	Sample Time:	16:15:00
% Moisture :	20.61			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	55	ug/kg	1.0			Yes	
Benzene	59	ug/kg	1.0			Yes	
Chloromethane	6.0	ug/kg	1.0	U	U	Yes	
Trichloroethene	57	ug/kg	1.0			Yes	
Vinyl chloride	6.0	ug/kg	1.0	U	U	Yes	
Bromomethane	6.0	ug/kg	1.0	U	U	Yes	
Toluene	57	ug/kg	1.0			Yes	
Chloroethane	6.0	ug/kg	1.0	U	U	Yes	
Chlorobenzene	57	ug/kg	1.0			Yes	
Trichlorofluoromethane	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	ug/kg	1.0	U	U	Yes	
Acetone	12	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	6.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	6.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	12	ug/kg	1.0	JB	U	Yes	
trans-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	6.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Butanone	12	ug/kg	1.0	U	U	Yes	
Bromoform	6.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	6.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	120	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	6.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	6.0	ug/kg	1.0	U	U	Yes	
Bromodichloromethane	6.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	12	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	6.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	12	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	6.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	6.0	ug/kg	1.0	U	U	Yes	
o-Xylene	6.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	6.0	ug/kg	1.0	U	U	Yes	
Styrene	6.0	ug/kg	1.0	U	U	Yes	
Bromoform	6.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	6.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	6.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	6.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	6.0	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	VBLK08	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	5.0	ug/kg	1.0	U	U	Yes	
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	
Trichlorofluoromethane	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	
Acetone	10	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	2.7	ug/kg	1.0	J	J	Yes	
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Butanone	10	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroform	5.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	
Benzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	100	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/kg	1.0	U	U	Yes	
Toluene	5.0	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	10	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	
Styrene	5.0	ug/kg	1.0	U	U	Yes	
Bromoform	5.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	1.7	ug/kg	1.0	J	J	Yes	
1,2,3-Trichlorobenzene	3.3	ug/kg	1.0	J	J	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	VBLK33	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	
Acetone	10	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Butanone	10	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroform	5.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	
Benzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	100	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/kg	1.0	U	U	Yes	
Toluene	5.0	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	10	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	
Styrene	5.0	ug/kg	1.0	U	U	Yes	
Bromoform	5.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/kg	1.0	U	UJ	Yes	

Case No:	41646	Contract:	EPW10018	SDG No:	E2SB3	Lab Code:	A4
Sample Number:	VHBLK27F	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:	08102011	Sample Time:	00:00:00
% Moisture :	0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	
Acetone	10	ug/kg	1.0	U	U	Yes	
Carbon Disulfide	5.0	ug/kg	1.0	U	U	Yes	
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Butanone	10	ug/kg	1.0	U	U	Yes	
Bromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
Chloroform	5.0	ug/kg	1.0	U	U	Yes	
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	
Benzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dioxane	100	ug/kg	1.0	U	U	Yes	
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	
Methylcyclohexane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
4-Methyl-2-pentanone	10	ug/kg	1.0	U	U	Yes	
Toluene	5.0	ug/kg	1.0	U	U	Yes	
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	
2-Hexanone	10	ug/kg	1.0	U	U	Yes	
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	
Styrene	5.0	ug/kg	1.0	U	U	Yes	
Bromoform	5.0	ug/kg	1.0	U	U	Yes	
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	
1,3-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,4-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	ug/kg	1.0	U	UJ	Yes	

Edit History Report

Case No: 41646

Contract: EPW10018

SDG No: E2SB3

Lab Code: A4

Method: VOA_Low_Med

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E2S26	Soil	Methylene chloride	Validated Result	7.2	14	Deborah Connet	9/26/11 9:41 AM	
E2S28	Soil	Methylene chloride	Validated Result	5.4	11	Deborah Connet	9/26/11 9:41 AM	
E2S30	Soil	Methylene chloride	Validated Result	6.0	12	Deborah Connet	9/26/11 9:42 AM	
E2S32	Soil	Methylene chloride	Validated Result	6.9	14	Deborah Connet	9/26/11 9:42 AM	
E2S85	Soil	Benzene, (2-methyl-1-butenyl)-	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, (2-methyl-1-butenyl)-	Validated Result		13	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, (2-methyl-1-butenyl)-	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1,2,3,5-tetramethyl-	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1,2,3,5-tetramethyl-	Validated Result		25	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1,2,3,5-tetramethyl-	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1-methyl-2-(1-meth...)	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1-methyl-2-(1-meth...)	Validated Result		170	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 1-methyl-2-(1-meth...)	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 4-ethyl-1,2-dimethyl-(02)	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 4-ethyl-1,2-dimethyl-(02)	Validated Result		90	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Benzene, 4-ethyl-1,2-dimethyl-(02)	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Indan, 1-methyl-	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Indan, 1-methyl-	Validated Result		15	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Indan, 1-methyl-	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Methylene chloride	Validated Result	6.7	13	Deborah Connet	9/26/11 9:43 AM	
E2S85	Soil	Total Alkane TICs	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Total Alkane TICs	Validated Result		1100	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	Total Alkane TICs	Validation Flag		J	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	trans-Decalin, 2-methyl-	Units		ug/kg	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	trans-Decalin, 2-methyl-	Validated Result		41	Deborah Connet	9/26/11 9:45 AM	
E2S85	Soil	trans-Decalin, 2-methyl-	Validation Flag		JN	Deborah Connet	9/26/11 9:45 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Units		ug/kg	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Units		ug/kg	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Validated Result		34	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Validated Result		95	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Validation Flag		JN	Deborah Connet	9/26/11 9:47 AM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (01)	Validation Flag		JN	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (02)	Reportable	Y	N	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (02)	Units		ug/kg	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (02)	Validated Result		130	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 1,2,4,5-tetramethyl- (02)	Validation Flag		JN	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 2-ethyl-1,4-dimethyl-	Units		ug/kg	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 2-ethyl-1,4-dimethyl-	Validated Result		250	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Benzene, 2-ethyl-1,4-dimethyl-	Validation Flag		JN	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Methylene chloride	Validated Result	9.1	18	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Naphthalene, decahydro-2-me... (01)	Units		ug/kg	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Naphthalene, decahydro-2-me... (01)	Validated Result		2700	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Naphthalene, decahydro-2-me... (01)	Validation Flag		J	Deborah Connet	9/26/11 9:47 AM	
E2S87	Soil	Total Alkane TICs	Reportable	Y	N	Deborah Connet	9/26/11 9:47 AM	
E2S89	Soil	Methylene chloride	Validated Result	5.4	11	Deborah Connet	9/26/11 9:48 AM	
E2SB3	Soil	Methylene chloride	Validated Result	5.9	12	Deborah Connet	9/26/11 9:49 AM	
E2SB3MS	Soil	Benzene	Validated Result	6.0	59	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Benzene	Validated Result	59	6.0	Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Benzene	Validation Flag	U		Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Benzene	Validation Flag		U	Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Bromomethane	Validated Result	57	6.0	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Bromomethane	Validated Result	6.0	57	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Bromomethane	Validation Flag		U	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Bromomethane	Validation Flag	U		Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Chloromethane	Validated Result	59	6.0	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Chloromethane	Validated Result	6.0	59	Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Chloromethane	Validation Flag		U	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Chloromethane	Validation Flag	U		Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Methylene chloride	Validated Result	6.0	12	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Toluene	Validated Result	6.0	57	Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Toluene	Validated Result	57	6.0	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Toluene	Validation Flag	U		Deborah Connet	9/26/11 9:54 AM	
E2SB3MS	Soil	Toluene	Validation Flag		U	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Trichloroethene	Validated Result	6.0	56	Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Trichloroethene	Validated Result	56	6.0	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Trichloroethene	Validation Flag	U		Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Trichloroethene	Validation Flag		U	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Vinyl chloride	Validated Result	56	6.0	Deborah Connet	9/26/11 9:53 AM	
E2SB3MS	Soil	Vinyl chloride	Validated Result	6.0	56	Deborah Connet	9/26/11 9:50 AM	
E2SB3MS	Soil	Vinyl chloride	Validation Flag		U	Deborah Connet	9/26/11 9:53 AM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E2SB3MS	Soil	Vinyl chloride	Validation Flag	U		Deborah Connet	9/26/11 9:50 AM	
E2SB3MSD	Soil	Benzene	Validated Result	6.0	59	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Benzene	Validated Result	59	6.0	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Benzene	Validation Flag	U		Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Benzene	Validation Flag		U	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Bromomethane	Validated Result	57	6.0	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Bromomethane	Validated Result	6.0	57	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Bromomethane	Validation Flag		U	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Bromomethane	Validation Flag	U		Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chlorobenzene	Validated Result	6.0	57	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chlorobenzene	Validated Result	57	6.0	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chlorobenzene	Validation Flag	U		Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chlorobenzene	Validation Flag		U	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chloroethane	Validated Result	57	6.0	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chloroethane	Validated Result	6.0	57	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chloroethane	Validation Flag		U	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chloroethane	Validation Flag	U		Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chloromethane	Validated Result	59	6.0	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chloromethane	Validated Result	6.0	59	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Chloromethane	Validation Flag		U	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Chloromethane	Validation Flag	U		Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Methylene chloride	Validated Result	6.0	12	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Toluene	Validated Result	6.0	57	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Toluene	Validated Result	57	6.0	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Toluene	Validation Flag	U		Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Toluene	Validation Flag		U	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Trichloroethene	Validated Result	6.0	57	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Trichloroethene	Validated Result	57	6.0	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Trichloroethene	Validation Flag	U		Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Trichloroethene	Validation Flag		U	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Vinyl chloride	Validated Result	57	6.0	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Vinyl chloride	Validated Result	6.0	57	Deborah Connet	9/26/11 9:51 AM	
E2SB3MSD	Soil	Vinyl chloride	Validation Flag		U	Deborah Connet	9/26/11 9:52 AM	
E2SB3MSD	Soil	Vinyl chloride	Validation Flag	U		Deborah Connet	9/26/11 9:51 AM	

Library Search Compound Report

Data File : C:\msdchem\1\data\C0070.D
 Acq On : 13 Aug 2011 14:12
 Sample : 0014539-05
 Misc : E2S85 4.66GM SOIL
 DataAcq Meth:VOAC.M

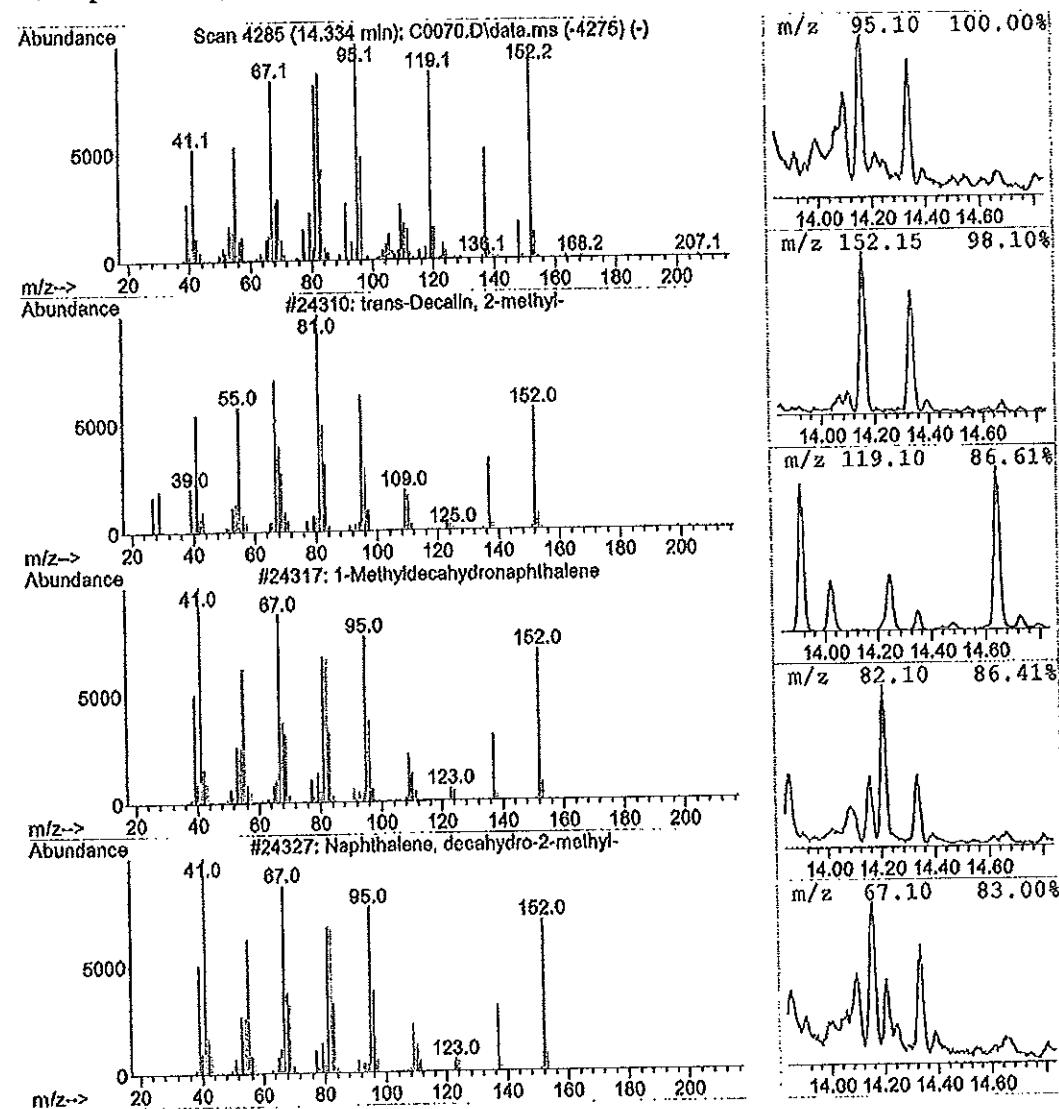
Vial: 8
 Operator: SP
 Inst : C-5973
 Multiplr: 1.00

Quant Time: Aug 17 16:20:20 2011
 Quant Results File: SOSC0064.RES
 Quant Method : C:\msdchem\1\methods\SOSC0064.M
 Quant Title : CLP SOM1.2-VOA-SOIL- 5GM Heated Purge

TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: Lscint.p

 Peak Number 37 trans-Decalin, 2-methyl- Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.	
14.334	30.40 ug/L	539373	1,4-Dichlorobenzene-d4	13.246	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	trans-Decalin, 2-methyl-	152	C11H20	1000152-47-3	89 ✓
2	1-Methyldecahydronaphthalene	152	C11H20	002958-75-0	78
3	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	78
4	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	58
5	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	53



Library Search Compound Report

Data File : C:\msdchem\1\data\C0073.D
 Acq On : 13 Aug 2011 15:30
 Sample : 0014539-06
 Misc : E2S87 3.43GM SOIL
 DataAcq Meth:VOAC.M

Vial: 11
 Operator: SP
 Inst : C-5973
 Multiplr: 1.00

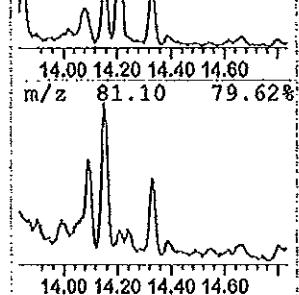
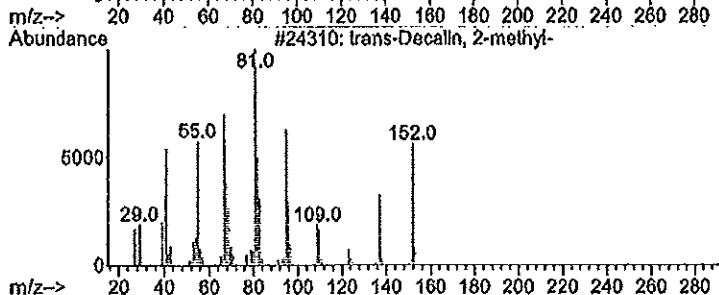
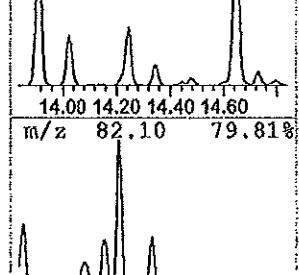
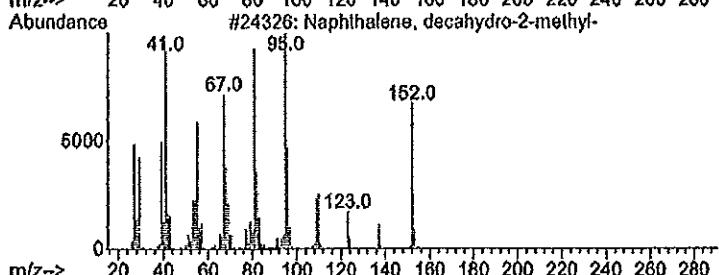
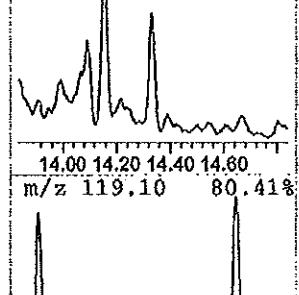
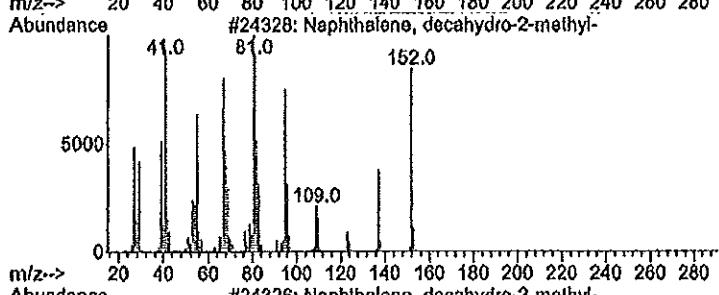
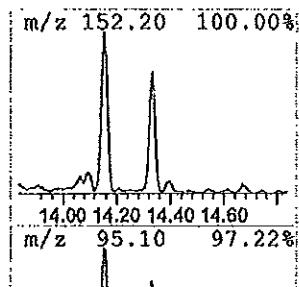
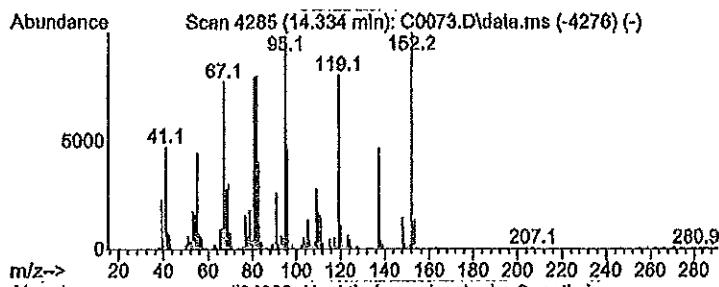
Quant Time: Aug 17 16:26:49 2011
 Quant Results File: SOSC0064.RES
 Quant Method : C:\msdchem\1\methods\SOSC0064.M
 Quant Title : CLP SOM1.2-VOA-SOIL- 5GM Heated Purge

TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.p

 Peak Number 39 Naphthalene, decahydro-2-me... Concentration Rank 28

Unknown

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.334	38.84 ug/L	1115810	1,4-Dichlorobenzene-d4	13.246
Hit#	5	Tentative ID	MW MolForm	CAS# Qual
1	Naphthalene, decahydro-2-methyl-	152 C11H20		002958-76-1 58
2	Naphthalene, decahydro-2-methyl-	152 C11H20		002958-76-1 53
3	trans-Decalin, 2-methyl-	152 C11H20		1000152-47-3 53
4	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152 C10H16O		000464-48-2 53
5	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152 C10H16O		000464-48-2 46



Sample Data Group
E2S11
From the
Garden City Ground Water Plume
Expanded Site Investigation

Only Samples Labeled
E2S11, E2S51, and E2SB2
Were used in the Miller Salvage Reassessment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE:

SUBJECT: Review of Data
Received for Review on: 30 August 2011

FROM: Timothy Prendiville, Supervisor (**SR-6J**)
Superfund Contract Management Section

TO: Data User: IDEM
mjworsk@idem.IN.gov
Level 3 Data Validation

We have reviewed the data for the following case:

SITE Name: Garden City GW Plume (IN)

Case Number: 41645 SDG Number: E2S11

Number and Type of Samples: 11 Water Samples (Trace VOA)

Sample Numbers: E2S11, E2S21- E2S23, E2S51- E2S53, E2S84, E2S91, E2SA8, E2SB2

Laboratory: ALS Laboratory Group Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: **SA-5J**

Case Number: 41645

SDG Number: E2S11

Site Name: Garden City GW Plume (IN)

Laboratory: ALS Laboratory Group

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eleven (11) preserved water samples labeled E2S11, E2S21- E2S23, E2S51- E2S53, E2S84, E2S91, E2SA8 and E2SB2, were shipped to ALS Laboratory Group located in Salt Lake City, UT. All samples were collected 8/9/11 and 8/10/11 and received 8/10/11 and 8/11/11 intact and properly cooled.

All samples were analyzed for the Trace VOA list of compounds. All samples were analyzed according to CLP SOW SOM01.2 (6/2007) and reviewed according to the NFG for SOM01.2 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.6).

Sample E2S11 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

No samples were identified as field blanks or field duplicates.

1. HOLDING TIME

No Problems Found.

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No Problems Found.

3. CALIBRATION

No Problems Found.

4. BLANKS

The following trace volatile samples have common contaminant analyte concentrations reported less than 2x the CRQL. The associated method blank has common contaminant analyte concentration less than 2x the concentration criteria. Detected compounds are qualified "U". Non-detected compounds are not qualified. Reported sample concentrations have been elevated to 2x the CRQL.

Methylene chloride
VHBLKT1

5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY

No Problems Found.

6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample E2S11 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

No Problems Found.

6B. LABORATORY CONTROL SAMPLE

Not applicable to trace volatile analyses.

7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as field blanks or field duplicates.

8. INTERNAL STANDARDS

No Problems Found.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all trace volatile compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following trace volatile samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified "J".

E2S11

Chloromethane, Vinyl chloride, trans-1,2-Dichloroethene, 1,1-Dichloroethane

E2S11MS, E2S11MSD

Chloromethane, Vinyl chloride, trans-1,2-Dichloroethene, 1,1-Dichloroethane,
1,1,1-Trichloroethane

E2S21, E2S23, E2S52, E2S84

Chloromethane

E2S51

Vinyl chloride, 1,1-Dichloroethane, 1,1,1-Trichloroethane, Trichloroethene

E2S91

Cyclohexane, Toluene, Ethylbenzene, m,p-Xylene

E2SA8

Toluene

E2SB2

Acetone, Toluene

VBLKT1

Methylene chloride

A library search indicates a match below 85% for a TIC compound in the trace volatile sample. Detected compounds are qualified "J".

Unknown Propene @ 1.65

E2S91, E2SA8

Unknown Isopropyl Alcohol @ 3.57

E2S53, E2SB2

Case Number: 41645

Site Name: Garden City GW Plume (IN)

SDG Number: E2S11

Laboratory: ALS Laboratory Group

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

The Trace Volatile Sample Summary Reports does not include the TICs with no CAS Numbers. Please refer to the TIC Report – NFG #9 for a complete list of the TICs associated with following samples.

E2S53, E2S91, E2SA8, E2SB2

CADRE Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

Case No:	41645	Contract:	EPW11037	SDG No:	E2S11	Lab Code:	DATAc
Sample Number:	E2SB2	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0033	pH:	1.0	Sample Date:	08092011	Sample Time:	16:30:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	
Chloromethane	0.67	ug/L	1.0			Yes	
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	
Bromomethane	0.50	ug/L	1.0	U	U	Yes	
Chloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	
Acetone	2.6	ug/L	1.0	J	J	Yes	
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Butanone	5.0	ug/L	1.0	U	U	Yes	
Bromochloromethane	0.50	ug/L	1.0	U	U	Yes	
Chloroform	0.50	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	
Benzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	
Toluene	0.13	ug/L	1.0	J	J	Yes	
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	
o-Xylene	0.50	ug/L	1.0	U	U	Yes	
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	
Styrene	0.50	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Total Alkanes	0.69	ug/L	1.0	JB	J	Yes	

Sample Summary Report

Case No:	41645	Contract:	EPW11037	SDG No:	E2S11	Lab Code:	DATAc
Sample Number:	E2S11	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0025	pH:	1.0	Sample Date:	08092011	Sample Time:	15:10:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	
Chloromethane	0.27	ug/L	1.0	J	J	Yes	
Vinyl chloride	0.11	ug/L	1.0	J	J	Yes	
Bromomethane	0.50	ug/L	1.0	U	U	Yes	
Chloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	
Acetone	5.0	ug/L	1.0	U	U	Yes	
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	0.12	ug/L	1.0	J	J	Yes	
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	0.23	ug/L	1.0	J	J	Yes	
cis-1,2-Dichloroethene	0.61	ug/L	1.0			Yes	
2-Butanone	5.0	ug/L	1.0	U	U	Yes	
Bromochloromethane	0.50	ug/L	1.0	U	U	Yes	
Chloroform	0.50	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	
Benzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichloroethene	0.66	ug/L	1.0			Yes	
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	
Toluene	0.50	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	
o-Xylene	0.50	ug/L	1.0	U	U	Yes	
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	
Styrene	0.50	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Total Alkanes	0.56	ug/L	1.0	JB	J	Yes	

Case No:	41645	Contract:	EPW11037	SDG No:	E2S11	Lab Code:	DATAc
Sample Number:	E2S11MS	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0025	pH:	1.0	Sample Date:	08092011	Sample Time:	15:10:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	5.2	ug/L	1.0			Yes	
Dichlorodifluoromethane	0.50	ug/L	1.0	U	U	Yes	
Benzene	5.7	ug/L	1.0			Yes	
Chloromethane	0.21	ug/L	1.0	J	J	Yes	
Vinyl chloride	0.12	ug/L	1.0	J	J	Yes	
Trichloroethene	5.9	ug/L	1.0			Yes	
Toluene	5.0	ug/L	1.0			Yes	
Bromomethane	0.50	ug/L	1.0	U	U	Yes	
Chlorobenzene	5.1	ug/L	1.0			Yes	
Chloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichlorofluoromethane	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	
Acetone	5.0	ug/L	1.0	U	U	Yes	
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	0.13	ug/L	1.0	J	J	Yes	
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	0.23	ug/L	1.0	J	J	Yes	
cis-1,2-Dichloroethene	0.62	ug/L	1.0			Yes	
2-Butanone	5.0	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	0.15	ug/L	1.0	J	J	Yes	
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	
o-Xylene	0.50	ug/L	1.0	U	U	Yes	
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	
Styrene	0.50	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	

Case No:	41645	Contract:	EPW11037	SDG No:	E2S11	Lab Code:	DATAc
Sample Number:	E2S11MSD	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0025	pH:	1.0	Sample Date:	08092011	Sample Time:	15:10:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	5.2	ug/L	1.0			Yes	
Dichlorodifluoromethane	0.50	ug/L	1.0	U	U	Yes	
Chloromethane	0.30	ug/L	1.0	J	J	Yes	
Benzene	5.4	ug/L	1.0			Yes	
Vinyl chloride	0.12	ug/L	1.0	J	J	Yes	
Trichloroethene	5.9	ug/L	1.0			Yes	
Bromomethane	0.50	ug/L	1.0	U	U	Yes	
Toluene	5.0	ug/L	1.0			Yes	
Chlorobenzene	5.1	ug/L	1.0			Yes	
Chloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichlorofluoromethane	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	
Acetone	5.0	ug/L	1.0	U	U	Yes	
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	0.12	ug/L	1.0	J	J	Yes	
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	0.23	ug/L	1.0	J	J	Yes	
cis-1,2-Dichloroethene	0.60	ug/L	1.0			Yes	
2-Butanone	5.0	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	0.14	ug/L	1.0	J	J	Yes	
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	
o-Xylene	0.50	ug/L	1.0	U	U	Yes	
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	
Styrene	0.50	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	

Case No:	41645	Contract:	EPW11037	SDG No:	E2S11	Lab Code:	DATAc
Sample Number:	E2S51	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	W-0028	pH:	1.0	Sample Date:	08092011	Sample Time:	15:30:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	
Chloromethane	0.53	ug/L	1.0			Yes	
Vinyl chloride	0.40	ug/L	1.0	J	J	Yes	
Bromomethane	0.50	ug/L	1.0	U	U	Yes	
Chloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	
Acetone	5.0	ug/L	1.0	U	U	Yes	
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	
1,1-Dichloroethane	0.18	ug/L	1.0	J	J	Yes	
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Butanone	5.0	ug/L	1.0	U	U	Yes	
Bromochloromethane	0.50	ug/L	1.0	U	U	Yes	
Chloroform	0.50	ug/L	1.0	U	U	Yes	
1,1,1-Trichloroethane	0.19	ug/L	1.0	J	J	Yes	
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	
Benzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	
Trichloroethene	0.35	ug/L	1.0	J	J	Yes	
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	
Toluene	0.53	ug/L	1.0			Yes	
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	
o-Xylene	0.50	ug/L	1.0	U	U	Yes	
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	
Styrene	0.50	ug/L	1.0	U	U	Yes	
Bromoform	0.50	ug/L	1.0	U	U	Yes	
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	
Total Alkanes	0.58	ug/L	1.0	JB	J	Yes	